# CASE NEG

# SOLVENCY – OCS

# 1NC SOLVENCY

**Can't solve and long time frame – volume of gas based on false assumptions, infrastructure issues, no impact on international prices, no effect until 2030, not economically feasible to extract all the gas**

Martin 07 – senior energy analyst in the Energy Information Administration in the US department of Energy (Phyllis, "Impacts of Increased Access to Oil and Natural Gas Resources in the Lower 48 Federal Outer Continental Shelf", US Energy Information Administration, 2007, http://www.eia.gov/oiaf/aeo/otheranalysis/ongr.html)//BD

Assumptions about exploration, development, and production of economical fields (drilling schedules, costs, platform selection, reserves-to-production ratios, etc.) in the OCS access case are based on data for fields in the western Gulf of Mexico that are of similar water depth and size. Exploration and development on the OCS in the Pacific, the Atlantic, and the eastern Gulf are assumed to proceed at rates similar to those seen in the early development of the Gulf region. In addition, it is assumed that local infrastructure issues and other potential non-Federal impediments will be resolved after Federal access restrictions have been lifted. With these assumptions, technically recoverable undiscovered resources in the lower 48 OCS increase to 59 billion barrels of oil and 288 trillion cubic feet of natural gas, as compared with the reference case levels of 41 billion barrels and 210 trillion cubic feet.

The projections in the OCS access case indicate that access to the Pacific, Atlantic, and eastern Gulf regions would not have a significant impact on domestic crude oil and natural gas production or prices before 2030. Leasing would begin no sooner than 2012, and production would not be expected to start before 2017. Total domestic production of crude oil from 2012 through 2030 in the OCS access case is projected to be 1.6 percent higher than in the reference case, and 3 percent higher in 2030 alone, at 5.6 million barrels per day. For the lower 48 OCS, annual crude oil production in 2030 is projected to be 7 percent higher—2.4 million barrels per day in the OCS access case compared with 2.2 million barrels per day in the reference case (Figure 20). Because oil prices are determined on the international market, however, any impact on average wellhead prices is expected to be insignificant.

Similarly, lower 48 natural gas production is not projected to increase substantially by 2030 as a result of increased access to the OCS. Cumulatively, lower 48 natural gas production from 2012 through 2030 is projected to be 1.8 percent higher in the OCS access case than in the reference case. Production levels in the OCS access case are projected at 19.0 trillion cubic feet in 2030, a 3-percent increase over the reference case projection of 18.4 trillion cubic feet. However, natural gas production from the lower 48 offshore in 2030 is projected to be 18 percent (590 billion cubic feet) higher in the OCS access case (Figure 21). In 2030, the OCS access case projects a decrease of $0.13 in the average wellhead price of natural gas (2005 dollars per thousand cubic feet), a decrease of 250 billion cubic feet in imports of liquefied natural gas, and an increase of 360 billion cubic feet in natural gas consumption relative to the reference case projections. In addition, despite the increase in production from previously restricted areas after 2012, total natural gas production from the lower 48 OCS is projected generally to decline after 2020. Although a significant volume of undiscovered, technically recoverable oil and natural gas resources is added in the OCS access case, conversion of those resources to production would require both time and money. In addition, the average field size in the Pacific and Atlantic regions tends to be smaller than the average in the Gulf of Mexico, implying that a significant portion of the additional resource would not be economically attractive to develop at the reference case prices.

**Plan's effect is delayed – takes forever to develop infrastructure and get leases**
Kenneth **Medlock** III (Fellow in Energy Studies, at the James A. Baker Institute for Public Policy, Adjunct assistant professor in the department of economics at Rice University) July **2008** "THE OCS LEASING MORATORIUM: WHICH WAY FORWARD?" http://www.bakerinstitute.org/publications/EF-WWT-OCSMoratorium-071008.pdf
Of course, opening the OCS will not likely have an immediate impact on oil prices because of the time necessary to organize lease sales and to develop supply delivery infrastructure. However, once development progresses, the expected growth in supply would eventually influence market prices. Thus, opening the OCS should be viewed as a relevant part of a larger strategy encompassing a portfolio of options aimed at easing prices over time

**MMS overreach tanks the aff**
Curry L. **Hagerty** (Specialist in Energy and Natural Resources Policy at the Congressional Research Service) June 15, **2010** "Outer Continental Shelf Moratoria on Oil and Gas Development" http://crs.ncseonline.org/nle/crsreports/10Jul/R41132.pdf
Minerals Management Service (MMS)34
Generally, federal agencies take OCS leasing moratoria direction from Congress and the President. In some cases however, lack of coordination between federal agency actions and the actions of Congress and the President in terms of OCS leasing moratoria, has created tension and controversy. For example, MMS has exercised agency authority to constrain leasing activities in areas not under moratoria policy set by Congress or the President. Deferring oil and gas development is within agency authority even when it is inconsistent with prevailing moratoria policy. MMS has deferred from offering OCS areas numerous times over the years in response to recommendations from governors, stakeholders, and others.35

**State regulations negate the effect of the aff**
Sheena **Martin** (Writer for ICIS – a news agency specializing in Chemicals, Energy, and Fertilizer) January **2011** "Shale gas revolution in the US presents regulatory and infrastructure challenges" http://www.icis.com/Articles/2011/01/10/9423607/shale-gas-revolution-in-the-us-presents-regulatory-and-infrastructure.html
Most state legislation - more than 30 states have varying degrees of shale production - has been based on rules laid down by Colorado after a year of stakeholder discussions. The Colorado laws include development of a comprehensive drilling plan, ways to minimize the effect on communities and the environment, drilling at a required distance from residences and reporting chemical identities in case of a related environmental or medical need to a state commission. The information would be kept confidential. New York, Wyoming and Pennsylvania have been active in creating similar regulations, and Pennsylvania passed regulations on fracking in November 2010. Regulations in Pennsylvania require disclosure of a Material Safety Data Sheet (MSDS) with a list of additives used in drilling. Wyoming also requires MSDS reporting but companies must disclose the main ingredient of chemical additives. New York tried to place a temporary stop on fracking, so environmental impacts could be studied. In early December, the New York legislative body, the state Assembly, passed a moratorium on fracking until May 2011. However, the governor vetoed the bill.

**New plan solves production – opens up 75% of OCS**
**BOEM**, 6/28/**2012** (Bureau of Ocean Energy Management, US Dept of the Interior, 28 June 2012, "Proposed Final Outer Continental Shelf Oil & Gas Leasing Program," http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/PFP%2012-17.pdf)//CC
This PFP includes fifteen potential lease sales in six planning areas – the Western and Central Gulf of Mexico (GOM), the portion of the Eastern GOM not currently under Congressional moratorium, and the Chukchi Sea, Beaufort Sea and Cook Inlet planning areas offshore Alaska. That portion of the individual planning area that is being considered for leasing in a Five Year Program is referred to as the program area. A program area can be the entire planning area as in the Cook Inlet offshore Alaska; a small portion as in the Eastern GOM; or any size in between. The program also provides for the number and timing of sales within and among areas. Maps A and B show the areas proposed for

leasing (Proposed Final Program Areas). These include the richest and most promising areas for oil and gas exploration and development on the U.S. OCS and together they include more than 75 percent of the total undiscovered, technically recoverable oil and natural gas resources estimated for the entire OCS The PFP, therefore, advances the Administration's Blueprint for a Secure Energy Future, which aims to promote the Nation's energy security and reduce oil imports by a third by 2025 through a comprehensive national energy policy that includes a focus on expanding safe and responsible domestic oil and natural gas production.

# AT: NO INVESTMENT

**Lifting the moratorium would stimulate investment**

Hastings 09 – US representative for Washington's 4th district (Doc, "Hastings: Interior's Delay on OCS Leasing is really a Moratorium", Committee on Natural Resources, 2/25/2009, http://naturalresources.house.gov/news/documentsingle.aspx?DocumentID=134646)//BD

WASHINGTON, D.C., February 25, 2009 - At the House Natural Resources Committee's third oversight hearing on development of the U.S. Outer Continental Shelf (OCS), Ranking Member Doc Hastings criticized the Secretary of the Interior's decision to "delay" OCS leasing, noting that it's really a continuation of the moratorium.¶"Although Congress acted last year to lift the moratoria on OCS development, it will require action by the Department of Interior to produce a plan for that development before any of our resources can be produced," said Hastings. "Sadly, the Secretary of the Interior decided to delay the ongoing planning and public comment period for new leasing and exploration on the Outer Continental Shelf. The true affect of Secretary Salazar's six month delay is a reinstatement of a ban on drilling. Make no mistake, this action has precisely the same result as a moratorium. So let us call it what it truly is, a moratorium, not a delay."¶"The bottom line is that we need to develop the OCS and we need to start now," continued Hastings. "We cannot keep sitting on our hands, talking, while all other industrialized foreign countries develop their own domestic resources**. We have companies that are ready, willing and able to invest private dollars to develop these resources**, along with the technology to do so in an environmentally responsible manner, and we should let them. The federal government is currently spending billions of taxpayer dollars to revive the economy; perhaps instead we should take advantage of private investments that will result in new jobs and new revenue."¶Below is a copy of Ranking Member Doc Hastings's opening statement from today's hearing:¶"Mr. Chairman, I want to thank you for calling today's hearing. This is the third hearing focusing on how to address solutions for developing our OCS resources. Today we will finally hear from individuals who are actively developing oil and gas resources. Unfortunately, due to restrictions kept in place by this Congress for nearly a generation most of the development in the U.S. has been restricted to just a few small areas.¶I hope that today we can here from the representatives before us about what they believe are the resources available in the OCS, how much investment and job creation they foresee from expanded OCS development and how best Congress could put in place rules to make OCS development occur.¶One of the largest questions facing Congress is what resources are really available in the OCS. While a 2007 MMS inventory report showed that there are billions of barrels of oil available in the OCS, the real question is how to responsibly develop those resources.¶Estimates in the Atlantic Ocean, last surveyed in the 1970's, currently show 3.8 billion barrels of oil and 37 Trillion Cubic feet of natural gas. I have been told that if the estimates were to expand in the same fashion that Gulf of Mexico resources have expanded since the 1970's, then we would have more than 18 billion barrels of oil and 89 Tcf of gas in the Atlantic Ocean alone. These resources are a significant source of American energy development and a tremendous opportunity to free us from foreign oil and imported natural gas.¶ I hope that the witnesses today can give us some sense of what they know of the resources in the areas formerly under Congressional Moratoria. I am particularly interested in what areas they believe are the most productive for development and their willingness to commit billions of their companies' dollars into exploration and research in finding the resources in the OCS.¶At a time when Congress is spending hundreds of billions to stimulate the economy, we have before us companies that are prepared to spend billions of their own dollars to bring much needed job creation and infrastructure to our shores. The only hurdle to those billions in investments has been access, which until recently has been blocked by the federal government.¶Although Congress acted last year to lift the moratoria on OCS development, it will require action by the Department of Interior to produce a plan for that

development before any of our resources can be produced. Sadly, the Secretary of the Interior decided to delay the plan for new leasing and exploration on the Outer Continental Shelf.¶The true affect of Secretary Salazar's six month delay is a reinstatement of a ban on drilling. Make no mistake; this action has precisely the same result as a moratorium. So let us call it what it truly is, a moratorium, not a delay.¶Last August, the Minerals Management service published a Draft Proposal Plan based on the lifting of the Presidential moratoria. That DRAFT plan was the first step in a long process of getting to OCS development, a process which includes resource assessments, impact reviews, environmental impact statements and multiple options for public comments.¶All this must be in place before we can allow companies access to developing our resources, which will stimulate the economy, create jobs and make the U.S. less dependent on foreign controlled oil.¶The need to more forward with the planning process is more important than ever because the development of these resources won't simply occur overnight. The process of leasing, finding, and producing in the OCS, particularly deep water OCS, is one of the most challenging technological achievements in the world.¶The exploration and development…process and permitting…has meant that it often can take 10 years to develop a lease in the OCS. Now that we have new areas opened, I want to know what areas could be produced sooner than 10 years. In addition, I hope for suggestions on how we could shorten the time it takes to bring needed energy resources online for the American consumer.

**Development of the OCS can result in new jobs, investment**

Drilling Contractor 13 – Magazine covering global drilling and completion industry ("Study: Development offshore US Atlantic could add $195 billion in investment", Drilling Contractor, 12/11/13, http://www.drillingcontractor.org/study-development-offshore-us-atlantic-could-add-195-billion-in-investment-27151)//BD

Approximately 85% of acreage in US federal offshore waters is inaccessible to offshore oil and natural gas development, either through lack of federal lease sales or moratoriums. Opening the US Atlantic Outer Continental Shelf (OCS) to offshore development could have remarkable benefits for job creation, US energy security, domestic investment and revenue to the government, according to a study conducted by Quest Offshore Resources at the request of API and the National Ocean Industries Association.

Current offshore oil and gas production in the US is essentially limited to the Central, Western and a small amount of the eastern Gulf of Mexico with limited additional legacy production off Alaska and California. Total offshore oil and natural gas production in federal waters was a combined 1.87 million barrels of oil equivalent per day as of June 2013 or 9% of US production.

Oil and gas development off the Atlantic coast has been restricted since the 1980s. Only 51 exploratory wells were drilled in the 1970s and 1980s, mainly in shallow water. A lease sale off the coast of Virginia was planned for 2011 but was subsequently canceled. No lease sales in the Atlantic OCS are currently scheduled. The next five-year plan of OCS lease sales, yet to be released, would start in 2017.

According to the study, oil and natural gas development in the Atlantic OCS between 2017 and 2035 could:

Create nearly 280,000 new jobs along the East Coast and across the country.

Result in an additional **$195 billion in new private investment.**

Contribute up to $23.5 billion per year to the US economy.

Add 1.3 million barrels of oil equivalent per day to domestic energy production, which is about 70% of current output from the Gulf of Mexico.

Generate $51 billion in new revenue for the government.

"Oil and natural gas production off our Atlantic coast is a potential gold mine," API Director of Upstream and Industry Operations Erik Milito said. "Developing oil and natural gas in the Atlantic could put

hundreds of thousands of Americans to work, make us more energy secure and bring in needed revenue for the government. But none of these benefits will appear unless the federal government follows pro-development energy policies."

The Obama administration has been considering whether to allow seismic surveying in the Atlantic for the last five years and shortly will begin work on the next five-year offshore leasing program. Americans stand to benefit if seismic surveying permits are approved and the Atlantic and other offshore areas that have been kept off-limits are included in the next five-year leasing program.

"Major capital investments, job creation and revenue to the government would all begin years before the first barrel goes to market," Mr Milito said. "Expanding offshore energy production would also send a strong signal to the energy markets that America is leading the world in developing energy resources, which could help put downward pressure on prices."

Drilling activity in the Atlantic OCS would be expected to be robust upon the opening of the Atlantic OCS to offshore oil and gas E&P. Atlantic OCS drilling would be expected to begin in 2019, with an average of 30 wells drilled annually from 2017 to 2035 mostly in deepwater. In the last five years of the forecast (2031 to 2035), an average of 66 wells would be expected to be drilled annually as the number of active projects grows and the need for development wells increase.

## US investment high – assumes increasing costs and flat prices

Drilling Contractor 14 - covering global drilling and completion industry ("Survey ranks US, Brazil as top investment markets but raises concerns for costs, risks", Drilling Contractor, 2/3/2014, http://www.drillingcontractor.org/survey-ranks-us-brazil-as-top-investment-markets-but-raises-concerns-for-costs-risks-27703)//BD

The **US** and Brazil rank as the **most favorable** regions for oil and gas investment in 2014, but there will be pressures to reduce costs and consolidate, a new report from DNV GL stated. These pressures include a greater discipline over capital expenditures in response to rising operational costs, increasing regulation and shortage of skilled workers, according to the report based on a survey of more than 430 senior oil and gas executives and in-depth interviews with more than 20 executives.

Survey respondents ranked Australia No. 3 for investment, followed by Malaysia and China, but dropped the UK and Norway from shared fourth place to seventh and ninth places, respectively, because of the lack of major investments. Nigeria was cited as the No. 1 least favorable investment destination, followed by three Middle Eastern countries with ongoing political issues – Iraq, Afghanistan and Iran.

Unconventional oil and gas production and rising offshore production gave the US top ranking, despite increasing costs and flat oil prices. "The price of oil is always a major factor in the economic viability of any development project, but a big issue is the trend for more challenging exploration projects, such as deepwater campaigns, that are requiring the commitment of large sums of money with more risk and uncertainty," said Arthur Stoddart, director of Marine and Technical Services, North America, for DNV GL.

"These projects demand high-specification and high-quality drilling equipment that is driving the price up." As examples, he cited Chevron's decision to hold off on the Rosebank development west of the Shetland Islands due to economic reasons. For some US Gulf of Mexico projects where the initial engineering work has been completed, high costs also have delayed development plans.

In Brazil, deepwater pre-salt discoveries present attractive investment opportunities, but regulations make them expensive, Mr Stoddart said. Australia, with its huge LNG projects at a time when global gas demand for gas is high, is a market with high operating and labor costs, he continued. The report does not reflect the recent energy reforms passed in Mexico, however. "Assuming all the reforms take effect this year, Mexico will become an increasingly attractive destination for investment," he noted.

**Lifting the moratorium boosts investment**

Quest Offshore 11 – consulting company provides market intelligence to global and gas community ("The State of the offshore U.S. Oil and Gas Industry", American Petroleum Institute, December 2011, http://www.api.org/~/media/Files/Policy/Exploration/Quest_2011_December_29_Final.pdf)//BD

Deepwater permits in the Gulf of Mexico are currently being issued at less than half the rate ¶ compared with pre-moratorium levels, and shallow water permits are being issued at rates 40 ¶ percent lower. In 2011, the U.S. is projected to account for only 6 percent, or $8.9 billion, of ¶ global offshore oil and gas investment valued at $146 billion. Considering the discovered and ¶ undiscovered resources in place in the Gulf of Mexico, this figure of 6 percent is far lower than ¶ would be expected. Prior to the moratorium, the U.S. was projected to account for 12 percent of ¶ worldwide offshore oil and natural gas investment in 2011, which is much more in-line with the ¶ offshore resource base in the Gulf of Mexico. ¶Lost Investment and Jobs in 2010 and 2011 ¶The effects of the deepwater drilling moratorium and subsequent permit slowdown have ¶already reduced total capital and operating expenditures in the Gulf of Mexico by a combined ¶$18.3 billion for 2010 and 2011 relative to pre-moratorium plans. ¶Since April 2010, eleven deepwater drilling rigs have left the Gulf of Mexico. These rigs have ¶gone to countries such as Brazil, Egypt and Angola. Through 2015, the investment in other ¶regions instead of the U.S. associated with these rigs is estimated to be over $21.4 billion ¶including drilling spending and associated project equipment orders, even accounting for the ¶portion of equipment that will likely be manufactured in the United States. As a result of ¶decreases in investment due to the moratorium, total U.S. employment is estimated to have ¶been reduced by 72,000 jobs in 2010 and approximately 90,000 jobs in 2011. ¶Putting the Gulf of Mexico Back to Work -- A Return to Pre-Moratorium Permitting Rates ¶If drilling permits going forward were to be issued at pre-moratorium rates, the number of ¶shallow water projects delayed could be significantly reduced from 85 under the current path to ¶37 over the 2012 to 2015 period, and from 48 to 9 for the deepwater. ¶The increased number of projects **would increase investment in the Gulf of Mexico offshore oil ¶and gas industry by over $15.6 billion dollars** from 2012-2015. This additional investment would ¶increase average annual U.S. employment between 17,000 and 49,000 thousand jobs per year ¶over that time period. Offshore oil production would be higher over the next decade, for ¶example, by 2017 offshore oil production would rise by approximately 13 percent relative to its ¶current projected path. ¶A regulatory environment that eliminates unnecessary permitting delays and maintains ¶competitiveness with development opportunities in other regions of the world would provide a ¶first step to revitalizing the offshore oil and gas industry. Additional access to offshore areas ¶currently off-limits remains a key missing component of U.S. energy policy, and would provide ¶substantial additional gains to the nation in terms of energy security, employment and ¶government revenue.

**Investment is increasing now**

Curzio 14 – Small Stock specialist (Frank, "My Favorite Way to Invest in Offshore Oil Boom Right Now", The GrowthStock Wire, 3/7/2014, http://www.growthstockwire.com/3689/my-favorite-way-to-invest-in-the-offshore-oil-boom-right-now)//BD

Last year, I showed you how oil companies are spending record amounts of money to find oil. In 2013, oil and gas companies were expected to spend $644 billion. This year, oil and gas companies are expected to spend $723 billion.¶¶A large part of this money is being spent on offshore drilling. With oil prices high, countries like Brazil, China, Japan, Thailand, India, and

**even the U.S. are ramping up offshore drilling projects** in an effort to find crude oil in untapped areas.¶¶In August, I told you one of the biggest beneficiaries of this trend would be the infrastructure companies that build the massive offshore platforms. The two stocks I mentioned, Fluor (FLR) and Foster Wheeler (FWLT), are up an average of 30% since my essay.

# SOLVENCY – ARCTIC

# 1NC ROLLBACK

**Federal courts will overrule the affirmative for a lack of environmental study- destroys solvency**

**Dave 14** (Paresh, 4/24/14, Judge suspends Arctic drilling, orders new environmental report
LA Times, http://www.latimes.com/nation/nationnow/la-na-nn-arctic-drilling-new-environmental-report-20140424-story.html, JHR)

In the ongoing battle over offshore drilling, a **federal judge in Alaska told regulators Thursday to redo an environmental impact study** that underestimated the amount of recoverable oil and, potentially, the risks to delicate Arctic habitat. The decision by U.S. District Judge Ralph Beistline stopped short of scrapping the $2.6 billion in leases, however. His ruling followed an appeals court decision in January that federal officials had arbitrarily decided drilling companies could extract 1 billion barrels of oil from the shallow waters off the northwest coast of Alaska. That figure led to a misguided environmental study, the U.S. 9th Circuit Court of Appeals said. Now, the U.S. Department of the Interior must redo the supplemental analysis using what's expected to be a much higher estimate for the amount of oil extractable. In the meantime, **no drilling for oil or natural gas can take place**.

# 1NC SOLVENCY

**Investment in offshore drilling will decline – oversupply, exploration and production decreasing, reduce expenditures**

Hargreaves 14 – Financial writer for the Motley Fool (Rupert, "Yet More Analysts Turn Negative on Offshore Drilling", The Motley Fool, 2/11/2014, http://www.fool.com/investing/general/2014/02/11/yet-more-analysts-turn-negative-on-offshore-drilli.aspx)//BD

At the end of last year, analysts at Citigroup put out a note to investors warning of a possible slowdown in the offshore drilling market. Usually, a view from one group of analysts is not enough to sway investor opinion. However, since the initial publication of this research, more analysts have turned negative on the sector and appear to be taking aim at some of the industry's most prolific names, including Seadrill (NYSE: SDRL ) , Transocean (NYSE: RIG ) , and Diamond Offshore (NYSE: DO ).

The negative comments from Citigroup have been supported by further comments from analysts at Barclays. In particular, Barclays analysts believe that the day rates for ultra-deepwater, or UDW, drilling units will drop by around 16%, to an average of $475,000 per day over the next few years. UBS analysts have also built on this case, with the firm's analysts suggesting that there could be a 12 to 18 month downturn ahead for the industry. Further, Raymond James analysts slashed expected 2015 sector earnings by 18%.

The reasoning behind this slew of downgrades? The market for jack-up drilling units is becoming oversupplied, and exploration and production spending is slowing while oil companies are seeking to reduce expenditures . Indeed, according to data from Rigzone, the utilization of rigs is broadly down across all types from the same period a year ago.

Not just oversupply

Barclays' analysts also suggested that companies with older fleets are more likely to suffer from this downturn than drillers with newer fleets -- a trend that has been forecast for some time. Unfortunately, in the worst case, Barclays believes that earnings before interest, taxes, amortization, and depreciation forecasts over the next two years will be up to 35% less than originally forecast for some drillers.

**No new investment in drilling and their models are wrong – no capital to expand, selling off production now**

Tverberg 14 – Actuary focused on issues on oil citing Steven Kopits who is the managing director of Douglas-Westwood a company that provides energy forecasts and surveys (Gail, "Beginning of the End: Oil Companies Cut Back on Spending", Resilience, 3/4/2014, http://www.resilience.org/stories/2014-03-04/beginning-of-the-end-oil-companies-cut-back-on-spending)//BD

Steve Kopits recently gave a presentation [link to presentation at resilience.org] explaining our current predicament: the cost of oil extraction has been rising rapidly (10.9% per year) but oil prices have been flat. Major oil companies are finding their profits squeezed, and have recently announced plans to sell off part of their assets in order to have funds to pay their dividends. Such an approach is likely to lead to an eventual drop in oil production. I have talked about similar points previously (here and here), but Kopits adds some additional perspectives which he has given me permission to share with my readers.

I encourage readers to watch the original hour-long presentation at Columbia University, if they have the time.

Controversy: Does Oil Extraction Depend on "Supply Growth" or "Demand Growth"?

The first section of the presentation is devoted the connection of GDP Growth to Oil Supply

Growth vs Oil Demand Growth. I omit a considerable part of this discussion in this write-up. Economists and oil companies, when making their projections, nearly always make their projections depend on "Demand Growth"–the amount people and businesses want. This demand growth is seen to be rising indefinitely in the future. It has nothing to do with affordability or with whether the potential consumers actually have jobs to purchase the oil products.

Kopits presents the following list of assumptions of demand constrained forecasting. (IOC's are "Independent Oil Companies" like Shell and Exxon Mobil, as contrasted with government owned companies that are prevalent among oil exporters.)

Kopits 10 Assumptions of Demand Constrained Forecasting

Thus, it is the demand constrained view of forecasting that gives rise to the view that OPEC (Organization of Petroleum Exporting Nations) has enormous leverage. The assumption is made that OPEC can add or subtract as much supply as much as it chooses. Kopits provides evidence that in fact the Demand view is no longer applicable today, so this whole story is wrong.

One piece of evidence that the Demand Model is wrong is the fact that world crude oil (including lease condensate) production has been nearly flat since 2004, in a period when China and other growing Eastern economies have been trying to motorize. In comparison, there was a rise of 2.7% per year, when the West, with a similar population, was trying to motorize.

Kopits 20 Motorization and Oil in Historical Context

Kopits points out that China's big source of oil supply has been US main street: China bids oil supply away from United States, to satisfy its needs. This is the way that markets have made oil available to China, when world supply is not rising much. It is part of the reason that oil prices have risen.

Another piece of evidence that the Demand Model is wrong relates to the assumption thatsocial tastes have simply changed, leading to a drop in US oil consumption. Kopits shows the following chart, indicating that the major reason that young people don't have cars is because they don't have full-time jobs.

Kopits 35 Driving and Employment

Kopits makes a comparison of the role of oil in GDP growth to the role of water in plant growth in the desert. Without oil, there is less GDP growth, just as without water, a desert is starved for the element it needs for plant growth. Lack of oil can considered a binding constraint on GDP growth. (Labor availability might be a constraint, but it wouldn't be a binding constraint, because there are plenty of unemployed people who might work if demand ramped up.) When more oil is available at a slightly lower price, it is quickly absorbed by markets.

"Supply Growth" is the limiting factor in recent years, because the amount of extraction is rising only slowly due to geological constraints and the number of users has risen to the point that there is a shortage.

Experience of Major Oil Producing Companies

Kopits presents data showing how badly the big, publicly traded oil companies are doing. He looks at two pieces of information:

"Capex" – "Capital expenditures" – How much companies are spending on things like exploration, drilling, and making of new offshore oil platforms

"Crude oil production" -

A person would normally expect that crude oil production would rise as Capex rises, but Kopits shows that in fact since 2006, Capex has continued to rise, but crude oil production has fallen.

Kopits 40 Oil majors capex and production

The above information is worldwide, not just for the US. At some point a person might expect companies to start getting frustrated–they are spending more and more, but not getting very far in extracting oil.

Kopits then shows another version of Capex history plus a forecast. (This time the amounts are labeled "Upstream," so the expenditures are clearly on the exploration and drilling side, rather

than related to refineries or pipelines.)

Kopits 41 Upstream Spend continues Strong

The amounts this time are for the industry as a whole, including "NOCs" which are government owned (national) oil companies as well as IOCs (Independent Oil Companies), both large and small. Kopits remarks that the forecasts shown were made only six months ago. When talking about the above slide Koptis says,

People in the industry thought, "Capex has been going up and up. It will continue to do very well. We have been on this trajectory forever, and we are just going to get more and more money out of this."

Now why is that? The reason is that in a Demand constrained model for those of you who took economics–price equals marginal cost. Right? So if my costs are going up, the price will also go up. Right? That is a Demand constrained model. So if it costs me more to get oil, it is no big deal, the market will recognize that at some point, in a Demand constrained model.

Not in a Supply constrained model! In a Supply constrained model, the price goes up to a price that is very similar to the monopoly price, after which you really can't raise it, because that marginal consumer would rather do with less than pay more. They will not recognize [pay] your marginal cost. In that model, you get to a price, and after that price, there is significant resistance from the consumer to moving up off of that price. That is the "Supply Constrained Price." If your costs continue to come up underneath you, the consumer won't recognize it.

The rapidly growing Capex forecast is implicitly a Demand constrained forecast. It says, sure Capex can go up to a trillion dollars a year. We can spend a trillion dollars a year looking for oil and gas. The global economy will accept that.

I quote this because I am not sure I have explained the situation exactly that way. I perhaps have said that demand had to be connected to what consumers could afford. Wages don't magically go up by themselves (even though economists think they can).

According to Koptis, the cost of oil extraction has in recent years been rising at 10.9% per year since 1999. (CAGR means "compound annual growth rate").

Kopits 43 Costs are Rising Fast

Oil prices have been flat at the same time. On the above chart, "E&P Capex per barrel" is pretty much the same type of expenses as shown on the previous two charts. E&P means Exploration and Production.

Kopits explains that the industry needs prices of over $100 barrel.

Kopits 45 Industry needs oil prices over 100

The version of the chart I have up is too small to read the names of individual companies. If you would like a chart with bigger names, you can download the original presentation.

Historically, oil companies have used a discounted cash flow approach to figure out whether over the long term, pricing for a particular field will be profitable. Unfortunately, this "standard" approach has not been working well recently. Expenses have been escalating too rapidly, and there have been too many new drilling sites producing below expectation. What Kopits shows on the above slide is the prices that companies need on different basis–a "cash flow" basis–so that each year companies have enough money to pay today's capital expenditures, plus today's expenses, plus today's dividends.

The reason for using the cash flow approach is because companies have found themselves coming up short: they find that after they have paid capital expenditures and other expenditures such as taxes, they don't have enough money left to pay dividends, unless they borrow money or sell off assets. Oil companies need to pay dividends because pension plans and other buyers of oil company stocks expect to receive regular dividends in payment for their equity investment. The dividends are important to pension plans.

In the last bullet point on the slide, Kopits is telling us that on this basis, most US oil companies need a price of $130 barrel or more. I noticed that Brazil's Petrobas needs a price of over $150 barrel. (OSX, Brazil's number two oil company, recently went bankrupt.)

In the slide below, Kopits shows how Shell oil is responding to the poor cash flow situation of the major oil companies, based on recent announcements.

**Drilling and exploration is limited – high costs, competition**

Proactive Investors 14 – Multi-meida news organization that operates financial websites that are media portals ("Oil rig contractors accept lower rates as offshore drill activity drops", Proactiveinvestors, 3/29/14, http://www.proactiveinvestors.com.au/companies/news/55283/oil-rig-contractors-accept-lower-rates-as-offshore-drill-activity-drops-55283.html)//BD

Drilling activity is dropping off, according to rig contractor SeaDrill, which today warned that day rates are set to fall.

SeaDrill said it has reason to believe its competitors would accepts day rates, for the most advanced rigs, in the order of US$425,000 to US$427,000, even though recent deepwater contracts were agreed between US$500,000 and US$550,000.

It indicates the cost of drilling could reduce by about a third from peaks of around US$650,000 per day.

"Currently, the market suffers from limited exploration drilling and delays in field developments from the major oil companies," SeaDrill said.

"The key question is when oil majors will resume tendering activity.

"To some degree, the decreased level of activity leads to further delays. Oil companies are trying to determine when day rates will trough, thus are not compelled to sign contracts if they feel day rates are still declining."

Just 7 new vessels have this far been ordered of delivery in 2016, whilst the figure for 2017 currently stands at 5, SeaDrill observed. Orders for 2014 and 2015 were 30 and 19 respectively.

Rig firms face tough investment decisions, SeaDrill said.

"The oil companies' new requirements after Macondo and the focus on increased water depth areas have significantly limited the contractibility of older equipment.

"The owners will face the choice of investing significant amounts into twenty or thirty year old assets in order to try to meet the new demands or simply just lay up the unit."

Whilst the contractor's sentiments aren't particularly inspiring, in terms of a broad industry wide outlook, however, it may present cost-saving opportunities for independents and plucky small-cap explorers, which have had squeezed capital budgets in recent years.

**Multiple barriers to investment – endangered species act, national ocean policy, EPA, air permitting – less revenue**

Kim 11 – Reporter for KTUU ("Oil industry discusses investment barriers at Meet Alaska Conference", KTUU, 1/21/11, http://articles.ktuu.com/2011-01-21/oil-industry_27043041)//BD

ANCHORAGE, Alaska — The oil industry says it has been met with barriers that make it difficult to invest in Alaska.¶ Friday, state businesses and the oil industry met to listen to what top energy leaders have to say about oil and gas in the state at the "Meet Alaska Conference."¶ This is the 28th year the alliance, an association of contractors that support big oil, has held the conference. This year's theme is "Capital Conundrum."¶ At the conference, many top leaders talked about how the oil and gas industry in Alaska is in jeopardy.¶ Decision makers in the industry spoke about the hurdles the industry faces from the state and the federal government.¶ The president of the alliance, Mark Hylen, says the message that nearly 550 attendees are hearing is that Alaska is not an attractive place to invest.¶ But many say Gov. Sean Parnell's proposal earlier this week for fewer taxes for the oil industry is a step in the right direction.¶ Critics argue **there's no guarantee that the change would increase jobs and investment, and it would mean less state revenue**.¶ But the oil industry says the proposal will help in the long run.¶ "You look

at some of the federal concerns that we are facing as an industry and that's federal overreach, that's the **endangered species act**, the **national ocean policy**, **the EPA** and the **air permitting**. It seems like every little hurdle we get to something else comes up," said Hylen.¶ "The inlet has a favorable fiscal regime, but we're not seeing investment come in and I think a lot of it has to do with barriers to market entry than it does with fiscal regime, at least in south central," said Cook Inlet Energy spokesperson J.R. Wilcox.¶The National Ocean Policy Coalition, a group working to create and implement a new national ocean policy, was also at the conference.¶The coalition discussed challenges they're facing with the lack of input from the industry and recreational users, as well as, concerns over transparency in the process.

# 1NC SQUO SOLVES

**Squo solves – investment in Mexico**

Caroll and Olson 13 – reporters for Bloomberg News (Joe and Bradley, "North America to Drown in Oil as Mexico Ends Monopoly", Bloomberg News, 12/16/2013, http://www.bloomberg.com/news/2013-12-16/north-america-to-drown-in-oil-as-mexico-ends-monopoly.html)//BD

The flood of North American crude oil is set to become a deluge as Mexico dismantles a 75-year-old barrier to foreign investment in its oil fields.

Plagued by almost a decade of slumping output that has degraded Mexico's take from a $100-a-barrel oil market, President Enrique Pena Nieto is seeking an end to the state monopoly over one of the biggest crude resources in the Western Hemisphere. The doubling in Mexican oil output that Citigroup Inc. said may result from inviting international explorers to drill would be equivalent to adding another Nigeria to world supply, or about 2.5 million barrels a day.

That boom would augment a supply surge from U.S. and Canadian wells that Exxon Mobil Corp. (XOM) predicts will vault North American production ahead of every OPEC member except Saudi Arabia within two years. With U.S. refineries already choking on more oil than they can process, producers from Exxon to ConocoPhillips are clamoring for repeal of the export restrictions that have outlawed most overseas sales of American crude for four decades.

"This is going to be a huge opportunity for any kind of player" in the energy sector, said Pablo Medina, a Latin American upstream analyst at Wood Mackenzie Ltd. in Houston. "All the companies are going to have to turn their heads and start analyzing Mexico."

Unprecedented Output

An influx of Mexican oil would contribute to a glut that is expected to lower the price of Brent crude, the benchmark for more than half the world's crude that has averaged $108.62 a barrel this year, to as low as $88 a barrel in 2017, based on estimates from analysts in a Bloomberg survey. Five of the seven analysts who provided 2017 forecasts said prices would be lower than this year.

The revolution in shale drilling that boosted U.S. oil output to a 25-year high this month will allow North America to join the ranks of the world's crude-exporting continents by 2040, Exxon said in its annual global energy forecast on Dec. 12. Europe and the Asia-Pacific region will be the sole crude import markets by that date, the Irving, Texas-based energy producer said.

Related: Oil Supply Surge Brings Calls to Ease U.S. Export Ban

Exxon's forecast, compiled annually by a team of company economists, scientists and engineers, didn't take into account any changes in Mexico, William Colton, the company's vice president of strategic planning, said during a presentation at the Center for Strategic and International Studies in Washington on Dec. 12.

Opening Mexico's oilfields to foreign investment would be "a win-win if ever there was one," said Colton, who described the move as "very good for the people of Mexico and people everywhere in the world who use energy."

$15 Billion Boost

Mexico Invites Foreigners to Boost Drilling

The bill ending the state monopoly was approved by the Mexican Congress Dec. 12. Before becoming law, the proposal must be ratified by state assemblies, most of which are controlled by proponents of the reform. Oil companies will be offered production-sharing contracts, or licenses where they get ownership of the pumped oil and authority to book crude reserves for accounting purposes. The contracts will be overseen by government regulators.

Though some foreign companies already operate in Mexico under service contracts with Petroleos Mexicanos, or Pemex, the reform could increase foreign investment by as much as $15 billion annually and boost potential economic growth by half a percentage point, JPMorgan

Chase & Co. said in a Nov. 28 report.

# JONES ACT LINKS TO PTX

Exemptions to the Jones Act spur massive backlash- even the smallest changes have empirically failed

**Hill 13** (Malia Blom, Director of Policy for the Grassroot Institute, a Hawaiian think tank, 4/7/13, "The Sinking Ship of Cabotage: How the Jones Act lets unions and a few companies hold the economy hostage," Capital Research Center, http://capitalresearch.org/2013/04/the-sinking-ship-of-cabotage-how-the-jones-act-lets-unions-and-a-few-companies-hold-the-economy-hostage/, JHR)

To the labor-industry coalition that protects the Jones Act, any proposal perceived to open **even the smallest window to reform is opposed with vigor.** In 1997, an effort to change maritime passenger law to help the cruise ship industry (and create more waterfront work for American cities) ran into the might of the maritime unions, which feared that allowing foreign-flag cruise ships to dock at two American ports in a row would be the wedge for total Jones Act reform.¶ **Pro-Jones lobbying has been effective, as has political spending** by maritime unions through their PACs. Between 1995 and 2000, **four bills were introduced in the House and Senate to repeal the act, and three more were introduced to amend** the construction and ownership provisions. None advanced. In 2010, Senators John McCain (R-Ariz.) and Jim Risch (R-Idaho) introduced the Open America's Waters Act, a bill to repeal the Jones Act. **It failed.**

Any reform is politically impossible

**Hill 13** (Malia Blom, Director of Policy for the Grassroot Institute, a Hawaiian think tank, 4/7/13, "The Sinking Ship of Cabotage: How the Jones Act lets unions and a few companies hold the economy hostage," Capital Research Center, http://capitalresearch.org/2013/04/the-sinking-ship-of-cabotage-how-the-jones-act-lets-unions-and-a-few-companies-hold-the-economy-hostage/, JHR)

The source of support Despite the strong case against the Jones Act, **efforts to reform or repeal it have been unsuccessful, and opponents are not optimistic.** Sen. John McCain, a consistent critic, said in 2011, "I would like to see the Jones Act repealed, but I don't think that's likely.... **I don't think I would get 20 votes if I were to bring it to the floor.**" The Jones Act lobby is a rare case of industry and labor working a shared purpose—to defeat any attempt to reform the protectionism and subsidies the maritime industry enjoys. For years, this powerful lobby even enjoyed the advantage of its own Congressional committee (the Merchant Marine and Fisheries Committee, which has now been absorbed into the House Committee on Natural Resources). **Both unions and shipping companies have also benefited** from the influence of generous political action committees. Merchant marine and longshoreman unions contributed over $2.4 million to candidates in the House and Senate between 2006 and 2012. (Some of the biggest recipients of their generosity include Sen. Hirono at $103,500; Rep. Bishop (D-N.Y.), $54,000; and Rep. Hanabusa, $51,500.) They have much to lobby for. Years of government subsidies allowed unions to push for ever higher wages, even while the cargo ships themselves became less globally competitive. In the early 1990s, a U.S.

Maritime Administration report found that a U.S. cargo ship's monthly labor costs were three times a European vessel's and ten times a Bahamian one. Finally, **one more group with deep pockets and political clout** wants to keep Congress from touching the Jones Act: lawyers. That is, **personal injury lawyers** who bring suits for seamen under Jones Act provisions. As Michael Hansen explains, these trial lawyers fear that reforming the act's cabotage sections could also lead to re-examining the seamen's rights provisions and thus damage the lawyers' lucrative business. When the issue of waivers to the Jones Act comes up in times of national emergency—as it did during the BP oil spill in the Gulf, after Hurricane Katrina, and after Storm Sandy—**the Jones Act lobby is loath to support even these temporary exceptions**, rightly seeing them as an admission that the act prevents efficient action. So deeply do these maritime interests oppose reform that Stuart Theis, executive director of U.S. Great Lakes Shipping Association, compared the act to the Holy Grail, saying, "**Dedication to the Jones Act is really quite almost religious**, I guess." Economist Gary Hufbauer used this metaphor: "It's the Maginot Line of this industry because foreign-manned and operated vessels are just much more competitive than the U.S. fleet." Where do we go from here? **Reform seems to have little or no chance, politically speaking.** Another gloomy thought: It's possible that if the Jones Act were significantly reformed during an administration like the present one, so hostile to trade and free markets, **the reform could backfire** by bringing in new executive branch regulations on shipping and cabotage.

# AT: JONES ACT

The Jones Act is codified in federal law- the states don't have authority over exemptions
**Hansen 14** (Michael, President of the Hawaii Shippers Council, 5/6/14, "Hawaii State Task Force Recommends Jones Act Exemption," Hawaii Reporter, http://www.hawaiireporter.com/hawaii-state-task-force-recommends-jones-act-exemption/123, JHR)
An exemption is the customary term for a permanent exclusion from a **federal cabotage statute such as the Jones Act** (Section 27 of the Merchant Marine Act of 1920 as amended). **An exemption must be enacted through a bill for an act which is passed by the Congress** and signed into law by the President. Use of "waiver" to in fact mean an "exemption" is confusing because "waiver" has such a specific and well-defined meaning in law.

# MANUFACTURING ADV

# 1NC PRICES LOW

**Natural gas prices will remain low for several decades- quantity proves**
Domm '14- CNBC executive news editor, responsible for news coverage of the markets and economy ( Patti, 1-17-2014, "Nat gas should stay cheap-for long time: Study, CNBC Market Insider, http://www.cnbc.com/id/101345224#.) LC

Natural gas prices are likely to stay low for at least the next 20 years, with a long-term annual average price of $4 to $5 per million Btu, a new study says. The study by IHS details anticipated increase in demand from residential and commercial users and from exports. Natural gas prices are likely to stay low for at least the next 20 years, with a long-term annual average price of $4 to $5 per million Btu, a new study says. The study by IHS details anticipated increase in demand from residential and commercial users and from exports. Even with new demand, the quantity of U.S. gas resources is so vast thanks to unconventional drilling techniques that average Henry Hub prices should not rise dramatically from the $4 to $5 range, though they could fluctuate. (Henry Hub, based in Louisiana, is the delivery point for physical natural gas traded in the Nymex futures market.) Henry Hub prices averaged $4.24 per million British thermal units in December, and hit a high above $13 per million Btu in October 2005. "We now have knowledge and comfort that we have an incredible resource base—technically recoverable resources of 3,000 trillion cubic feet," said Rita Beale, IHS senior director of power, gas, coal and renewables. "We have 900 tcfs of gas that can be recovered for $4 or less." Natural gas futures were trading Friday at $4.34 per million Btu on the Nymex. Beale said the projection is a long term average and that higher demand in some years could mean increased pressure on prices, like in 2015-2016, when a large number of coal-powered plants will shut down. "There will be more gas in the power grid, and we'll have more chemical plants coming on line," she said in an interview. "We do think we'll have prices rising gently, not spike." She also does not expect U.S. gas prices to rise to prices elsewhere in the world, once the U.S. begins exporting gas, expected to begin in 2019.Prices in Asia and elsewhere can be in double digits, and they are linked to oil prices. The study says that challenges to natural gas use include conversion costs and regulations that can discourage economical natural gas projects. The report also looks at the opportunity for natural gas in transportation, now in its infancy, and notes that never before has oil's dominance in vehicles been challenged by such low gas prices. For instance, retail gasoline and diesel prices are expected to be double the cost of equivalent natural gas. Thanks to cheaper supply from shale gas production, projects are already underway to convert to natural gas.

**Low shale gas prices due to low production cost**
Sakelaris '14- Staff Writer- Dallas Business Journal (Nicholas, 1-17-14, "Report: Natural gas prices stay low for 20 years," Dallas Business Journal, http://www.bizjournals.com/dallas/news/2014/01/17/report-natural-gas-prices-stay-low.html?page=all) LC
Natural gas producers waiting for the price to go back up might be waiting a long, long time. The price could remain in the $4 to $5 per million British thermal unit for at least the next 20 years, according to new research by the IHS. But the research released Thursday suggests that drillers can still go after shale gas economically at that price. "The newly abundant natural gas resource base presents an opportunity to rethink our approach to natural gas use," Tim Gardner, vice president of IHS and global head of Power, gas, Coal and Renewables. "Now that technology has greatly expanded our ability to produce natural gas at relatively low cost, we can look for more ways to capitalize on the economic, efficiency and environimental advantages that natural gas

offers." In reality, drilling in the Barnett Shale has gone down considerably in recent years as the price has bottomed out and exploration and production companies chase after more lucrative plays.

# 1NC SHALE SUSTAINABLE

**sq production solves --- a) companies are only reducing shale plays because it's so abundant and cheap---but low prices are self-correcting**

**Knowledge@Wharton 12**, the University of Pennsylvania's business school, "The Once and Future U.S. Shale Gas Revolution," 8/29/12, http://knowledge.wharton.upenn.edu/article.cfm?articleid=3068

> Today, operators are pulling back from more mature shale gas fields, such as the Barnett in Texas and the Haynesville in Arkansas, Louisiana, and Texas, and deploying to newer fields with the potential of producing gas along with oil -- including the Utica in Ohio and Bone Spring in Texas and New Mexico, says Drew Koecher, KPMG's U.S. energy leader in transactions and restructuring. With low gas prices, many shale gas developers are facing financial challenges. Chesapeake Energy, based in Oklahoma City and the nation's second largest shale gas company after Exxon Mobil, needs to raise cash through asset sales, while managing a U.S. Securities and Exchange Commission investigation into CEO Aubrey McClendon's alleged conflicts of interest, which involve taking loans against his personal stake in the company's wells, according to news reports.
>
> Still, the recent shale gas boom is far from over, and a full realization of the U.S. shale gas revolution is yet to come, say experts. For starters, the U.S. has significantly more resources to recover. "The U.S. has a long way to go before it depletes shale gas," says Brandon Beard, KPMG's managing director for U.S. energy transactions and restructuring. "It will take 10 to 20 years to play through." Moreover, as new demand for gas develops, gas prices will recover and buck up the industry. "The glut of gas is somewhat temporary," states Noam Lior, a Penn mechanical engineering and applied mechanics professor who is also on the graduate faculty of Penn/Wharton's Lauder Institute. "As long as oil prices are holding above $100 a barrel or so, gas will be very competitive." Jonathan Banks, senior climate policy advisor at the Clean Air Task Force in Boston, agrees. "Nothing cures low prices like low prices," he says. Spurred by these low prices, demand from electric utilities, chemical manufacturers, natural gas vehicles and overseas markets will restore health to the shale gas industry, and relatively low natural gas energy prices could help buoy the U.S. economy, experts predict. "It's a game changer," notes A.J. Scamuffa, U.S. chemicals leader at PwC in Philadelphia.

**b) No impact to decline rates---continual tech improvements**

Jason **Baihly 11**, the Schlumberger product line manager for multistage stimulation, focusing on directing new technology research and market analysis for multistage acidized and hydraulically fractured reservoirs, May 2011, "Study Assesses Shale Decline Rates," http://www.slb.com/~/media/Files/dcs/industry_articles/201105_aogr_shale_baihly.ashx

> Lessons learned from earlier analyses of shale plays are benefiting the later developments in terms of improved log and core evaluation, leading to more precise well placement in reservoir sweet spots as well as better completion and stimulation design. Improvements have been made in lateral length, stage selection, diverter use and pumping techniques. Real-time microseismic hydraulic fracture mapping has enabled operators to avoid geohazards while maximizing reservoir contact.
>
> While the Barnett Shale has the lowest initial production compared with the other plays, the decline rate for Barnett wells is markedly flatter, leading to the conclusion that fracture conductivity is sustained longer in the Barnett because of the favorable rock properties. However, a large number of open natural fractures in this area characterize the Barnett Shale. With this wealth of data, any number of comparisons can be made to determine if there are relationships among basins, production years, initial production rates or decline rates. This allows EUR forecasts to be made.

It is perhaps an unfair comparison, but when shale gas wells are compared with tight gas sands wells, and when vertical wells are compared with horizontal wells, in a general sense it is clear that horizontal shale gas wells offer significantly higher EURs-definitely when compared with vertical wells, but also when compared with tight gas sands horizontal wells. The normalized decline curves were similar for both horizontal shale gas and horizontal tight gas sands, if not slightly better for the shales.

For the time frame analyzed, the Cotton Valley sand is a lower limit for normalized production decline behavior for all commercial horizontal shale gas plays analyzed in the study (Table 1). Considering that the study was conducted using only publicly available data, and did not include production improvements from workovers, recompletions or refracs, one can conclude that the study results are likely on the conservative side.

Costs Versus Gas Prices

Bottom-line financial success in the shale plays depends on many things, not the least of which is the capital cost of leasehold acquisitions. Early entrants have a decided advantage, some paying one-tenth of the lease prices of latecomers. Different basins have exhibited decidedly different cost structures (Table 2). which impact the economic parameters. Consequently, differences were factored into the economic analysis by determining discount profitability indexes (DPI) to allow basins to be compared. For this analysis, well construction, royalty and operating costs were compared with the EUR at three discount rates, assuming a constant wellhead gas price of $4.00 an Mcf for the life of the well (Table 3). Profitability is defined for wells whose DPI is greater than 1.0 at a given discount rate.

Accordingly, for wells analyzed in core play areas in 2008 and 2009, only wells in the Barnett and Fayetteville were deemed to be profitable under spot gas prices. That said, it is important to note that many operators have some or all of their gas prices hedged at higher than spot price values. However, it also is clear that modern methods and technology supported by experience and knowledge are improving results significantly in most plays. The results shown in Table 4 reflect the break-even price for wells drilled in each formation based on wells completed in 2008 and 2009.

It is important to note that actual drilling, completing, stimulating and operating costs may vary1 greatly from operator to operator, resulting in a large impact on overall economics. Some operators may have better production in a given core area versus others, further improving the picture. In addition, as noted, nearly all operators have at least some portion of their gas prices hedged at levels that may make all or most of the shale plays analyzed viable.

**shale's sustainable for decades, cyclical rise and fall doesn't mean it's a bubble**

John **Hanger 11-26**, expert on energy, electric markets, and utility regulation with unique experience in and out of government, Special Counsel at the law firm Eckert Seamans and a Democratic candidate for Governor of PA, former Secretary of the Pennsylvania Department of Environmental Protection and Commissioner of the Pennsylvania Public Utility Commission, 11/26/12, "Debunking Latest Attacks On Shale Gas As Bubble/Ponzi Scheme & Systemic Threat To Economy," http://johnhanger.blogspot.com/2012/11/debunking-latest-attacks-on-shale-gas.html

Shale gas production for nearly a dozen years. A massive shale gas boom for now 5 years or since 2008. Record US natural gas production that crashed prices to below $2 for a thousand cubic feet.

Nothing stops the vampire like quality of attacks portraying the shale gas resource as soon to run out, as a bubble ready to pop, or a ponzi scheme. Here is the link to one of the latest: http://www.desmogblog.com/2012/11/13/shale-sas-bubble-about-to-burst-say-energy-insiders-art-berman-bill-powers. Indeed, Bill Powers is promoting a book to be published in May, 2013 theorizing that the shale gas resource will last just 5 to 7 years more. Mind you such forecasts of impending shale gas supply doom are already about 3 years old, and soon US shale gas production will enter its 13th year.

Powers and Art Berman, who has done more than anyone to assert that the shale gas resource will soon collapse, also state that the economy faces cataclysm, like the financial catastrophe of 2008, when the shale gas resource is soon exhausted. This comparison of the shale gas industry to the US financial system is, however, absurd.

The industry has no too big to fail problem. Indeed, with about 60 different companies holding drilling permits in just Pennsylvania, the gas industry features a lack of concentration and has traits opposite of too big to fail.

Moreover, the gas industry is not the equivalent of a basic, economic infrastructure, unlike the banking system that is. Economic life goes on through gas booms and busts, while a financial collapse brings all commerce crashing down.

By pointing to the 2008 financial collapse and suggesting that shale gas is another round of such disaster, Berman and Powers engage in fear mongering and attention seeking behavior. Tellingly, the recent pull back in dry gas production in the US, of course, results from the opposite of an emerging gas supply shortage. Instead, a very real gas supply **glut** crashed the price and caused rigs to redeploy to oil and wet gas.

But as some rigs went to more profitable opportunities, the gas in the ground stayed put, where it will be, when the gas rigs return. And return they will, once gas prices move to $4 to $6 per thousand cubic feet range. And there is conservatively 20 years of shale gas to be produced within that price range.

Moreover, were the US price to go above $6--hardly a high price, when today Europe and Asia pay $10 to $16 for natural gas-- the available shale gas supply certainly totals many decades more.

# 2NC SHALE SUSTAINABLE

**Shale boom to last a long time- empirical examples of busts assume oil is imported**
Blackmon '14- managing director in the FTI Consulting Strategic Communications practice (David, 4-24-14, "Texas Oil Boom More Sustainable than Prior Cycles, Energy In Depth, http://energyindepth.org/texas/texas-oil-boom-sustainable/) LC
People often ask how long we should expect the current boom in shale oil and natural gas that is happening in Texas and throughout much of the United States to last. The correct answer today will be some variation on the theme: "a very long time." One presenter at this week's Eagle Ford Consortium Conference in San Antonio, Greg Leveille of ConocoPhillips, told his audience that the 25 county region that makes up the Eagle Ford Shale play should expect to see "decades and decades" of production. Local citizens in the Eagle Ford region, the Permian Basin of West Texas, and other significant shale plays around the country naturally worry about when the next "bust" will come, which is not an unreasonable concern to have. After all, conventional oil and gas booms in previous decades have almost always eventually wound down into a bust at some level. But there are many reasons to believe that the shale boom will be different, and the Eagle Ford play provides a very good example why. As Leodoro Martinez, who chairs the Eagle Ford Consortium, told a reporter, "Everybody talks about boom and bust. We want to talk about the boom without having a bust." The differences between today's situation and that of prior booms are many. Start with the fact that previous booms, like the oil boom of the early 1980s, came about due to high oil prices driven by restrictions in supply. The restrictions in the 1980s were artificially driven by OPEC, and prior booms came about simply due to a failure by the global industry to identify adequate new resources. In every case, you had rising demand and limited supplies to meet it. Today's boom in the United States is different in that we now have rapidly rising domestic supplies meeting rising demand (although domestic demand for some fuels, like gasoline, has actually leveled out in recent years). Where in the past the United States was forced to rely more and more heavily on imports from OPEC countries, today's shale boom is enabling our country to actually lower its imports on a daily basis, with our imports having been cut almost in half since 2007. In the meantime, rapidly rising demand in China, Japan, India and the rest of the Pacific Rim is filling the void in U.S. imports, consuming all the oil the OPEC countries and Russia can produce. This all ensures the price of oil will remain healthy enough for the U.S. drilling boom to continue, even as the United States continues its path toward energy security, rather than away from it.

**US has enough oil to continue fracking for a long time- no bust**
Badiali '14- editor of the *The S&A Resource Report*, a monthly investment advisory that focuses on the oil, energy, and mining sectors (Matt, 6-25-14, "6.1 Trillion Reasons the Shale Boom is Just Getting Started," Before Its News, http://beforeitsnews.com/financial-markets/2014/06/6-1-trillion-reasons-the-shale-boom-is-just-getting-started-2733240.html) LC
Drilling technologies have allowed us to extract oil and gas directly from the source rocks, or shale… and reversed a nearly 40-year decline in oil production. In 2008, the United States produced 1.8 billion barrels of oil. In 2013, we produced 2.7 billion barrels… a 50% increase in five years. One way or another, you've probably made money from this trend. The oil boom has helped keep the economy afloat. Oil stocks, as measured by the iShares U.S. Energy ETF (IYE),

are up 47% over the past two years. They've helped power the broad market indexes to new highs. Many believe that there isn't enough oil in shale for the boom to last… But we've done the math. It's an estimate people aren't getting from the U.S. government. And it shows what the skeptics are missing… Conventional oilfields – the "gushers" you might see in the movies – are geologic anomalies. They have to be in just the right place to catch the oil. Oil doesn't form in an oilfield. It migrates to that field from the shale. And not much of that shale oil makes it into the fields. On average, just 10% of the oil formed in the shale source seeps into conventional oilfields. In other words, around 90% of the oil either stays in the shale or leaks out to be lost. According to the Energy Information Administration (EIA), from 1859 to 2013, the U.S. produced 209 billion barrels of oil from conventional oilfields. And there are an estimated 30 billion barrels of conventional oil in reserves (not yet produced). That means over the past 150 years, the total oil from conventional U.S. fields is about 239 billion barrels. We can use that number and a little science to get an idea of how much oil shales hold. As I said, we can recover about 239 billion barrels of oil from conventional oilfields. But that's only a small fraction – just 35% – of all the oil in there.
That means about 682 billion barrels of oil remain in those fields. That's a lot of oil. (For context, the U.S. consumes about seven billion barrels a year.) And remember, that's still only around 10% of the total oil in the source shale. So the shale actually contains about 6.8 trillion barrels of oil. If we account for the volume of oil that migrated out, the shale still holds about 6.1 trillion barrels of oil. The infographic above illustrates this point. The small (blue) triangle shows all the oil that we recovered from conventional oilfields (and all the reserves yet to be produced). That's oil held in normal oilfields, not shale. The next larger (green) triangle shows all the oil held in conventional oilfields. The largest triangle shows all the oil in shale. As we said, if we take out the conventional oil, there are roughly 6.1 trillion barrels of oil remaining. If we can recover just 5% of that oil (we're getting 4% to 6% out of the Bakken today), we'll get about 300 billion barrels. That's more oil than the U.S. produced in the history of the oil industry AND all the oil reserves we have today.

**More sustainable fracking tech developing now**
Gurule '13- Writer at frackwire (Kendall Gurule, 7-16-13, "Sustainable fracking: produced water recycling, Frackwire, http://frackwire.com/sustainable-fracking-produced-water-recycling/) LC
One of the major issues environmental groups have with fracking is the massive fresh water use. Every year, hydraulic fracturing operations in the United States generate around 21 billion barrels, or 882 billion gallons, of produced water8. Over twice that amount of produced water is generated worldwide8. And in a lot of cases, this water goes back underground after use. The most common method of produced water disposal is reinjection. That is, produced water that is no longer potable is deposited back underground in a closed reservoir. In other words, a limited resource is used up—the process is not sustainable. As hydraulic fracturing expands in dry western states it is becoming increasingly important to look for innovative ways to stretch and preserve limited water resources. An elegant solution to this problem is to recycle produced water for reuse in fracking operations. In this sense, fracking can be done sustainably through the recycling of a finite resource. When water returns to the surface after fracturing operations, it contains all manner of new solutes that were not there before. Underground, water may pick up minerals, salts, oil and gas compounds, and even microorganisms. In order to successfully fracture a well, engineers must have very precise control of the properties of fracking fluid, meaning they must also have close control of the composition of the fluid. Accordingly, produced water requires varying levels of cleaning and treatment before it can be reused. In a sense, for water associated with fracking operations, the slate must be "wiped clean" before the next chapter can begin. While processes for treatment vary and are often proprietary, they are certainly available. However, this necessary step is the main obstacle to widespread recycling of flowback water. Treatment processes involve multiple stages of

treatment and filtering and are often cost prohibitive in comparison to reinjection. To further complicate matters, produced water composition varies with well location and even with fracturing stage, meaning treatment processes must be adjusted to fit.

**Claims that fracking is unsafe ignore regulations in place**

Quast '13- Senior vice president in the FTI strategic communications, Field Director, California (David, 8-30, "'Fracking' is safe, onshore or offshore," Energy in depth, CA, http://energyindepth.org/california/fracking-is-safe-onshore-or-offshore/) LC

Actually, several agencies regulate hydraulic fracturing offshore. The fact that CBD ignored the scientific evidence of the safety of and regulations on hydraulic fracturing isn't surprising considering that this is the same organization whose executive director admitted that the "key to our success" is ignoring science. BSEE is charged with regulating all aspects of hydraulic fracturing (when it occurs offshore) because of its expertise in oil and gas development. BSEE affirms that it closely monitors the activity: "to the limited extent that [hydraulic fracturing] is used offshore, each application is unique and receives a thorough examination by trained experts." BSEE requires permits for all offshore drilling in federal waters and carefully reviews each application to drill or modify a well, including the information about any planned hydraulic fracturing. Despite repeated claims from groups such as the CBD and EDC, oil and gas producers have never been exempted from the Clean Water Act (a fact that the U.S. Government Accountability Office has confirmed). The U.S. Environmental Protection Agency (EPA) has jurisdiction over discharge of wastewater through its National Pollutant Discharge Elimination System (NPDES) program, part of the Clean Water Act, as well as intake of seawater for use in operations. Further, the federal NPDES permitting process is extremely rigorous, especially for offshore drilling.

**Preliminary research shows no environmental problems with fracking**

Wolfgang '13- Washington Times White House Writer (Ben, 7-21-13, "Fracking's safety gets boost from federal research," The Washington Times, http://www.washingtontimes.com/news/2013/jul/21/frackings-safety-gets-boost-from-federal-research/?page=all"_) LC

The leading federal research effort into the controversial drilling method known as fracking has turned up no evidence so far linking the process to water contamination — a connection continually drawn by many environmentalist critics along with some Democrats in Congress. Department of Energy research, being conducted at a Marcellus Shale natural gas well in western Pennsylvania, thus far has shown that chemicals used in the hydraulic fracturing practice have stayed thousands of feet below drinking-water supplies. The study was begun about a year ago, but federal officials say final results are still months away.

# AT: PRICE SHOCKS

No price shocks- their evidence is fear mongering and prices are locked in

**Friedman 14** (Nicole Friedman, covers energy markets for The Wall Street Journal, 1/16/14, "Days of Near-Record-Low Natural Gas Prices Not Over Yet," Wall Street Journal, http://blogs.wsj.com/moneybeat/2014/01/16/days-of-near-record-low-natural-gas-prices-not-over-yet/, JHR)

Natural gas prices are climbing after a steep drop in supplies. But one analyst says bulls are forgetting something: There's plenty more where that came from. High production is still casting a shadow on the U.S. market, and the days of near-record-low gas prices are not over, says Katherine Spector, head of commodities strategy at CIBC World Markets. The current strength in prices could lead to even more supply down the line, she says. Utility companies have pulled natural gas out of storage at high rates this winter to meet indoor heating demand. In the week ended Jan. 10 – when record-cold temperatures swept the Midwest and East Coast – 287 billion cubic feet of natural gas were withdrawn from storage, according to the Energy Information Administration. That's the largest storage withdrawal on record – and the second largest, 285 bcf, occurred last month. Suddenly, market watchers are worrying that natural-gas supplies could drop to multi-year lows at the end of the winter, raising the bar for producers to replenish those inventories over the summer before temperatures drop again. Front-month Nymex futures recently traded up 2% at $4.412 a million British thermal units, just below multiyear highs. Ms. Spector says those **fears are overblown. Domestic production held near multi-year highs** in December, thanks to technical advances that have enabled energy producers to access supplies trapped in shale-gas fields. Output will only increase as new pipeline capacity is added, especially to transport gas from the booming Marcellus Shale, Ms. Spector said. Ms. Spector has been bearish for a while, and her 2013 prediction that natural gas prices would average $3.40/mmBtu was 33 cents too low. But she says the winter cold spike, despite recent soaring prices, is "the most bearish thing that could happen to gas." **More producers are hedging, or locking in their prices for the next six to 24 months at current levels**, Ms. Spector said.

Prices are stable at $4.50

**Larino 14** (Jennifer, Staff writer for NOLA.com, The Times-Picayune covering energy, banking/finance and general business news in the greater New Orleans area, 6/23/14, "Haynesville Shale boom slows as **natural gas prices stay low**, newspaper reports," NOLA, http://www.nola.com/business/index.ssf/2014/06/oilfield_service_firms_leaving.html, JHR)

The Alexandria Town Talk reports that oil and gas supply companies that once thrived during the Haynesville Shale drilling boom in northwest Louisiana are seeking business elsewhere as low natural gas prices have forced activity there to a near halt. Still, many firms are optimistic drilling activity will return to the area as natural gas demand rises. The newspaper reports that DeSoto Parish hotels and restaurants that once catered to the crowds of roughnecks continue to struggle. But oilfield tool, rig construction, pipe

manufacturing and other service **companies are on the move**, seeking business in thriving areas of Texas, the Northeast and even the emerging Tuscaloosa Marine Shale in central Louisiana. New drilling activity in the Haynesville has plummeted as the fracking boom has left the nation awash in natural gas. **Natural gas prices hovered around $4.50** per million British thermal units on Monday (June 23), far from the $10 or more drillers fetched for the commodity in the early days of Haynesville exploration.

**High Natural Gas prices do not lead to substantial economic losses**
**Kliesen, 2006-** [distributor],(Kevin L, November/December 2006 "Rising Natural Gas Prices and Real Economic Activity" Inter-university Consortium for Political and Social Research ICPSR01334-v1., http://www.icpsr.umich.edu.proxy.lib.umich.edu/icpsrweb/ICPSR/studies/1334#cite) LC
The literature examining the relationship between natural gas prices and macroeconomic activity appears to be considerably more sparse. However, because natural gas consumption in the aggregate economy is about half as much as petro- leum (in terms of BTU), it might be reasonable to conclude that rising natural gas prices might have smaller aggregate effects than do oil prices. Early work in this area appeared in a special issue of the October 1982 *Contemporary Policy Issues*. There were three papers in this issue that studied the effects of lifting natural gas price controls (i) on regional economic activity (Leone, 1982), (ii) on the distribution of income between households and suppliers (Stockfisch, 1982), and (iii) on infla- tion (Ott and Tatom, 1982a). The general conclusion of the papers was that the presumed effects of natural gas decontrol (higher prices, higher inflation, and falling real incomes) were not expected to be significant. According to the Energy Modeling Forum (1987), a 10 percent increase in natural gas prices was found to have roughly the same effect on real GDP growth (two years after the shock) as a 20 percent increase in oil prices. According to the median result of 11 models, a 50 percent oil shock reduced real gross national product by about 1.5 percent after one year and by a little less than 3 percent by the end of two years.[9] At the disaggregated level, Cullen, Friedberg, and Wolfram (2005) studied the effects of anticipated and unanticipated shocks to household dispos- able income arising from increased energy expen- ditures on household consumption. They found that increases in energy prices reduce consumption among lower-income households, but only when the increase is unanticipated.

**Benefits of production offset negative effect of high natural gas prices**
**Loris 2-11-13**- A senior policy analyst in Heritage's Roe Institute for Economic Policy Studies, Loris researches and writes about energy prices and other economic effects of environmental policies and regulations, including climate change legislation, energy efficiency and energy subsidies. (Nicolas Loris, "US Natural Gas Exports: Lift Restrictions and Empower the States, The Heritage Foundation, http://www.heritage.org/research/reports/2013/02/us-natural-gas-exports-lift-restrictions-and-empower-the-states) LC
While LNG exports would raise domestic prices, those higher prices would act as incentives for more exploration and production, offsetting some of the price increase, or even keeping prices as low as they are now, since the gas is still profitable to produce at a low price in some regions of the country. Providing other countries with cheaper energy would not only lower the prices of

products that the U.S. imports (because businesses could make the products more cheaply), it would also promote economic development in those countries so that they import more American goods. Simply put, the gains from free trade far outweigh any losses incurred. With respect to natural gas, the NERA study confirms this by concluding, "Across the scenarios, U.S. economic welfare consistently increases as the volume of natural gas exports increased. This includes scenarios in which there are unlimited exports."[8] Higher natural gas prices also open up opportunities for producers of other electricity sources, such as coal, nuclear energy, wind, or solar power. If natural gas prices rise to a point where other power sources are competitive, the result will be more competition and innovation within the energy sector.

Markets should direct natural gas toward its highest valued use. Another argument made against LNG exports is that the federal government should keep the natural gas locked here so that manufacturers can use it as a cheap input for a manufactured, more expensive product, such as steel, chemicals, or paper and then export those goods. Unsurprisingly, it is those in the chemical industry making this argument to protect against their prices rising.[9]

# AT: BERMAN

Arthur Berman has financial incentives to criticize the Shale boom—The New York Times hid his identity in an article to preserve their credibility

**Entine 7-1-11** – Visiting fellow and the American Enterprise Institute and a researcher and writer about corporate responsibility and science and society (Jon, "Natural Gas "bubble" report: market tinkering or shoddy reporting?" The American Enterprise Institute, http://www.aei.org/article/energy-and-the-environment/conventional-energy/natural-gas/natural-gas-bubble-report-market-tinkering-or-shoddy-reporting/)BC

The Times posted some of the emails, although they are heavily redacted "to protect the confidentiality of sources." Readers are left with hyperbolic but anonymous fragments of criticism, many years out of date, sprinkled with derisive comments from Berman and Rogers. Berman is described as a "geologist who worked two decades at Amoco and has been one of the most vocal skeptics of shale gas economics." There is no reason to begrudge Berman (or Groppe) from holding strong beliefs and trying to profit from them by selling their investment advice to hedge funds or other investors. But the responsibility of the Times is different. Context is the difference between truth and manipulation. Disclosure is a central canon of journalism ethics. What didn't the Times disclose? Berman has direct and indirect financial ties to a range of critics of shale gas. For example, In January, Berman testified as a paid expert witness before the Indiana Utility Regulatory Commission in support of Indiana Gasification, a unit of Leucadia National Corp., detailing the benefits of buying natural gas made from coal instead of hydraulic fracturing. The coal industry fears getting crushed by the cleaner, natural gas movement, and Berman backed coal. Berman not only has an indirect financial interest playing the role of shale gas skeptic, he has a direct conflict of interest: He (and Groppe) are "strategic partners" and "consultants" to Middlefield Capital in Toronto, according to Dean Orico, its president. They are both on retainer and are prominently featured on the company's website. Middlefield offers more than 30 funds and limited partnerships, including the Groppe Tactical Energy fund, which follow the two advisers' anti-shale gas investment outlook. It has sizable investments in key competitors to shale gas drillers, most prominently Canadian tar oil producers, an industry with far more environmental questions than the natural gas industry. Berman was a paid speaker at an event sponsored by the Canadian Imperial Bank of Commerce, according to both CIBC and Berman. Both Middlefield and CIBC World Markets have clients who would profit from Berman taking an aggressive public stance. Moreover, if any of their clients, or indeed the fund managers at Middlefield, knew that the Times story was coming out, they could face charges of market manipulation under Canadian and U.S. securities law. (Orico said that Middlefield was never contacted by the Times and only found out about the story after it appeared. Berman claims he told no one at CIBC or Middlefield that he would be featured in a Times story challenging the financial feasibility of the shale gas market.) Did Berman tell his strategic partners and clients, and directly profit from the Times story? Did Middlefield's funds or clients or CIBC's clients with knowledge of the Times' piece hold short interest in shale stocks or long interest in competitors' stocks? Did the Canadian oil sands industry, which includes Middlefield Capital, seek to influence the U.S. fracking debate, which could be a potential violation of the Foreign Agents Registration Act? Did Middlefield's funds or clients or CIBC's clients have short interest in shale stocks ahead of the Times report? Is the Times' key source dealing in inside information? Recall that Martha Stewart went to jail after being accused by the government of conspiracy, obstruction of justice, securities fraud and insider trading for getting advance word on market-moving news. One also wonders whether Berman disclosed his relationships to the New York Times. Only Urbina and his editors know for sure. Berman states in an email that he has never profited indirectly or directly from his advice and specifically never gave any "information" to Middleton in his role as strategic partner and paid consultant on natural gas about the shale gas debate. I attempted to contact the reporter, the Times' executive editor, managing editor, business desk, news desk and public editor by phone and email for comment on the issues raised by the story. Eileen Murphy of paper's corporate communications office responded, writing that "the facts of the story are not in question and we fully stand by it," refusing to address the ethical issues raised by Urbina's reporting.

# 1NC MANUFACTURING HIGH

**Manufacturing is high now – reshoring**

**Caminiti, 6/29/14** – a writer and editor whose work covers a wide range of business and social topics, including corporate profiles, health care, work/life issues, governance, sustainability and personal finance. Her writing appears in Fortune, NYSE, Time, and Money magazines, as well as NYSE's Big Stage digital site and CNBC Digital. Susan is a former staff writer for Fortune. (Susan, "States lure manufacturers and shore up jobs," CNBC, http://www.cnbc.com/id/101795323#.)//IS

It wasn't long ago that the thought of corporations bringing their manufacturing back to the U.S. seemed all but impossible. But that's precisely what's happening, and the trend is predicted to continue through the rest of the decade.

Consider Kent International, one of the largest U.S.-based bicycle manufacturers. The company, with headquarters in Parsippany, New Jersey, has been making its bikes overseas for more than 20 years. But with Chinese labor costs rising over the past several years, the company began to consider whether it made financial sense to bring some of that production back to the U.S. In the fall, Kent's new manufacturing facility will open in Clarendon County, South Carolina. According to the company, it will invest $4.5 million in the plant over the next three years and hire 175 workers capable of turning out roughly 500,000 bikes a year.

American companies have been offshoring their manufacturing for decades as a way to take advantage of low wages in places like China, Vietnam and other parts of Asia. But now a growing number of them, like Kent International, are rethinking that formula and are bringing at least some of their manufacturing back to the U.S.

States such as Alabama, Pennsylvania and Mississippi, to name a few, are getting in on this reshoring movement, as it's called, looking to attract manufacturing back home in the hope of boosting economic development and job growth.

There are a number of reasons for this shift. Wages in China have been growing roughly 15 percent per year over the past decade, while salaries for manufacturing jobs in the U.S. have risen on average just 2.3 percent over the past 10 years, according to the Labor Department. Factor in higher transportation costs, growing quality-control issues connected with goods made in China and cheaper domestic energy costs, and the case for bringing manufacturing back home begins to add up.

Indeed, a recent survey by The Boston Consulting Group (BCG) found that more than half of the CEOs at U.S.-based manufacturing companies with revenues greater than $1 billion are planning to bring production back to the U.S. from China or are actively considering it. The top three factors cited as the drivers of where goods should be made were labor costs, proximity to customers and product quality. In fact, more than 80 percent of the CEOs cited at least one of these reasons as a key factor. Other reasons included access to skilled labor, transportation costs, supply chain lead time and ease of doing business.

# 2NC MANUFACTURING HIGH

**Manufacturing high now – highest since 2008**

**Mutikani, 6/16/14** – Reuters news correspondent (Lucia, "Sturdy U.S. manufacturing data bolster growth outlook," Reuters, http://www.reuters.com/article/2014/06/16/us-usa-economy-industrialoutput-idUSKBN0ER1HA20140616?feedType=RSS&feedName=everything&virtualBrandChannel=11563)//IS

(Reuters) - U.S. manufacturing output rose in May and factory activity in New York state accelerated sharply this month, buoying hopes of a strong rebound in economic growth this quarter.

The brightening growth outlook was further boosted by news on Monday that confidence among homebuilders perked up this month, a good omen for the struggling housing market.

"Today's figures are evidence of a strengthening recovery of the economy. Things are really hopping out there," said Chris Rupkey, chief financial economist at Bank of Tokyo-Mitsubishi UFJ in New York.

Factory production increased 0.6 percent last month as output rose across a swath of industries, the Federal Reserve said on Monday. It also said output had slipped 0.1 percent in April, not as deeply as it had previously thought.

Separately, the New York Federal Reserve said its "Empire State" general business conditions index rose to 19.28 this month, the highest reading since June 2010, from 19.01 in May. Readings above zero indicate growth.

Factory orders in the state hit a four-year high and inventories increased significantly, indicating that restocking will contribute to growth this quarter after weighing heavily on the economy in the first three months of the year.

Although job growth at New York factories slowed, employees worked longer hours.

The reports added to employment and services industries data in suggesting the economy was bouncing back strongly after contracting at a 1.0 percent annual pace in the first quarter. Growth estimates for April-June quarter range as high as a 4 percent rate.

HOMEBUILDER MOOD IMPROVES

Federal Reserve officials meeting on Tuesday and Wednesday to assess the economy and deliberate on monetary policy are likely to view the fairly upbeat reports as confirmation of underlying strength in the economy.

The Fed is expected to announce a further cut to its monthly bond purchasing program, but is not seen raising interest rates until mid-2015.

Another report showed the National Association of Home Builders/Wells Fargo index of homebuilder confidence rose four points to 49 in June, just shy of the threshold that would be considered favorable for building conditions.

The improving sentiment bodes well for the housing recovery, which stalled last year after a run-up in mortgage rates.

Manufacturing output in May was led by a 1.5 percent jump in motor vehicle production. There were also gains in the output of machinery, computer and electronic products, electrical equipment and appliances, and fabricated metal products. Production of primary metals, however, slipped.

"Strength in this sector is a foundation for future growth," said Jay Morelock, an economist at FTN Financial in New York.

Mining output rose 1.3 percent in May, but utilities production fell 0.8 percent, a fourth straight monthly drop.

Overall industrial production rose 0.6 percent after declining 0.3 percent in April.

The amount of manufacturing capacity in use rose to 77.0 percent last month, the highest level since March 2008, from 76.7 percent in April.

**Manufacturing high now – resourcing and job increases**

**Swan, 6/19/14** – a graduate of Harvard University where she studied natural science, environmental management, and journalism (Noelle, "White House hails rebound of US manufacturing, but is it for real?" The Christian Science Monitor, http://www.csmonitor.com/Business/2014/0619/White-House-hails-rebound-of-US-manufacturing-but-is-it-for-real-video)//IS

The mass exodus of millions of factory jobs overseas in the early 2000s brought the American manufacturing sector to its knees. However, since 2010, manufacturing has started to regain some footing, with **more than 600,000 new jobs**, according to a new report.

What's more, many companies that outsourced production to China in the early 2000s are now considering rebuilding factories on US soil, according to a survey of manufacturing executives.

The Obama administration celebrated that growth in a series of press events this week as evidence that the US economy has turned a corner since the Great Recession. However, manufacturing experts suggest that declaration of victory might be premature.

A new report from the US National Economic Council, a White House agency, declared that American manufacturing is now more competitive than it has been **in decades**. As production has become more efficient with the advent of new technology, American manufacturers have been able to produce, boosting the sector's growth even further.

"Manufacturing output has increased 30% since the end of the recession, growing at roughly twice the pace of the economy overall, marking the longest period where manufacturing has outpaced US economic output since 1965," the report states.

While President Obama and his economic council have jubilantly reported an increase of 646,000 manufacturing jobs since 2010, included in the report, that increase is but a drop in the bucket compared with the mass exodus of manufacturing jobs seen in the decade prior, says Richard McCormack, editor and publisher of Manufacturing and Technology News.

"We suffered such a colossal loss of manufacturing jobs that we couldn't really lose many more," Mr. McCormack says. "We hit our nadir and we couldn't really go down more than we had. So we're really bouncing off the bottom."

In 2000, there were more than 17 million manufacturing jobs in this country, according to the US Bureau of Labor Statistics. That number dropped to just 14 million by 2004 and plunged even further following the 2008 financial crisis. By 2010, there were just 11.5 million manufacturing jobs.

However, there is added promise in the news that many companies that outsourced production to China in the early 2000s are now considering rebuilding factories on US soil, according to a survey conducted by the international consulting firm Boston Consulting Group that was featured in the National Economic Council report.

When BCG researchers surveyed 100 senior executives in US-based industries ranging from textiles to electronics to metals fabrication at the beginning of 2012, only seven percent of respondents said that their companies were actively "re-shoring," or relocating manufacturing back to the United States.

Eighteen months later, in a second survey, the number of respondents currently engaged in re-shoring nearly doubled to 13 percent, an increase that BCG statistician Hal Sirkin found so "astonishing" that he asked his team to poll another 100 executives from different companies to confirm that the survey had not yielded a statistical anomaly.

In total, more than half of those surveyed in 2013 said that their company was at least considering returning production to the US, up from just 37 percent in 2012. BCG estimates that

revival could bring between 3.5 to 5 million jobs back to the US by the end of the decade, Mr. Sirkin says.
While the results startled Sirkin, they are in keeping with changes in the difference of labor costs between the US and China that has made Chinese labor less of a bargain, says Willy Shih, a business administration professor at Harvard Business School and author of "Producing Prosperity: Why America Needs a Manufacturing Renaissance."
In the early 2000s, it cost manufactures an average of 10 times as much to employ a worker in the US as a worker in China, Mr. Shih says. That kind of differential left plenty of room for companies to cover the cost of shipping goods to the US.

Manufacturing sector is overwhelmingly powerful now – no risk of collapse
Mark **Perry** (professor of economics at the University of Michigan, Flint, is also a visiting scholar at the American Enterprise Institute) February 25, **2011** "The Truth About U.S. Manufacturing "
http://online.wsj.com/article/SB10001424052748703652104576122353274221570.html.html
Is American manufacturing dead? You might think so reading most of the nation's editorial pages or watching the endless laments in the news that "nothing is made in America anymore," and that our manufacturing jobs have vanished to China, Mexico and South Korea. Yet the empirical evidence tells a different story—of a thriving and growing U.S. manufacturing sector, and a country that remains by far the world's largest manufacturer. This is a particularly sensitive topic in my hometown of Flint, Mich., where auto-plant closings have meant lost jobs and difficult transitions for the displaced. But while it's true that the U.S. has lost more than seven million manufacturing jobs since the late 1970s, our manufacturing output has continued to expand. International data compiled by the United Nations on global output from 1970-2009 show this success story. Excluding recession-related decreases in 2001 and 2008-09, America's manufacturing output has continued to increase since 1970. In every year since 2004, manufacturing output has exceeded $2 trillion (in constant 2005 dollars), twice the output produced in America's factories in the early 1970s. Taken on its own, U.S. manufacturing would rank today as the sixth largest economy in the world, just behind France and ahead of the United Kingdom, Italy and Brazil. In 2009, the most recent full year for which international data are available, our manufacturing output was $2.155 trillion (including mining and utilities). That's more than 45% higher than China's, the country we're supposedly losing ground to. Despite recent gains in China and elsewhere, the U.S. still produced more than 20% of global manufacturing output in 2009. The truth is that America still makes a lot of stuff, and we're making more of it than ever before. We're merely able to do it with a fraction of the workers needed in the past. Consider the incredible, increasing productivity of America's manufacturing workers: The average U.S. factory worker is responsible today for more than $180,000 of annual manufacturing output, triple the $60,000 in 1972. Increases in productivity are a direct result of capital investments in productivity-enhancing technology, such as GM's next generation Ecotec engine. These increases are a direct result of capital investments in productivity-enhancing technology, which last year helped boost output to record levels in industries like computers and semiconductors, medical equipment and supplies, pharmaceuticals and medicine, and oil and natural-gas equipment.

### Manufacturing isn't declining in ways that matter – increasing productivity preserves manufacturing leadership

Steve **Chapman** 3-8-20**12**; a member of the Chicago Tribune's editorial board "Manufacturing an economic myth Nostalgia is no guide to sound policy" http://articles.chicagotribune.com/2012-03-18/news/ct-oped-0318-chapman-20120318_1_manufacturing-sector-rick-santorum-products

But if nostalgia were a sound guide to economic policy, we should be building Studebakers and rotary telephones. Neither Santorum nor Obama seems to grasp the realities of manufacturing in 21st-century America. The first is that it's not declining in the ways that matter. Compared with 1990, the total value of U.S. manufacturing output, adjusted for inflation, was up by 75 percent in 2010 — despite a drop caused by the Great Recession. It has declined as a share of gross domestic product only because other industries have expanded even more rapidly. Economist Mark J. Perry of the University of Michigan at Flint points out that in 2009, the total value of America's manufacturing output was nearly 46 percent greater than

China's. Over the past two decades, our share of the world's manufacturing has been pretty stable. The decline in the number of manufacturing jobs is taken as evidence that the sector is sick or uncompetitive or the victim of unfair trade practices. In reality, the change indicates sound health. Our manufacturing workers have become so much more productive that they can churn out more goods with a far smaller workforce. The same pattern, by the way, is evident in American agriculture. In 1900, 39 percent of all Americans lived on farms. Today it's 1 percent. It's a good thing, not a bad thing, that we need fewer people to produce our food. Likewise with manufactured products. Manufacturing accounts for a shrinking slice of the total economy mainly because as we grow wealthier, we spend a smaller portion of our income on physical products, like cars and appliances, and a bigger one on services, from health care to cellphone contracts to restaurant meals. That phenomenon holds across the developed world. It's the result of the free market at work, endlessly shifting resources to accommodate changes in consumer demand. Politicians don't think they should tell Americans to eat at Burger King instead of Chipotle, or buy baseball bats instead of soccer balls. They didn't insist we keep our typewriters when personal computers came along. For the most part, our leaders take it as normal and sensible to defer to consumer demand, rather than try to dictate it. Given that, why do they think they ought to rig the tax code to push consumption dollars from services, which Americans want, to goods, which they don't want quite so much? Why should they divert investment from more popular businesses to less popular ones? That's what the measures offered by Santorum and Obama would do. The point is to ease the tax burden of manufacturers at the expense of other companies, on the superstition that the former are more valuable than the latter. It's hard to see the fairness or the economic logic. When the president unveiled his proposal, Jade West of the National Association of Wholesaler-Distributors complained to The New York Times, "My guys are totally freaked out by manufacturing getting a different tax rate than we do. They're not more important in the economy than retail or distribution or anything else." In fact, manufacturing is bound to be a diminishing share of any advanced economy. Obama and Santorum can fling money into the teeth of that trend. But any time politicians want to resist powerful and beneficial economic forces, bet on the economic forces.

# 1NC MANUFACTURING RESILIENT

**US Manufacturing resilient – increasing production, employment, exports**
Blackden 12 – US Business Editor for the Daily Telegraph (Richard, "America's manufacturers show resilience in face of European slowdown", The Telegraph, 1/3/12, http://www.telegraph.co.uk/finance/newsbysector/industry/8990253/Americas-manufacturers-show-resilience-in-face-of-European-slowdown.html)//BD

A widely-watched index of manufacturers' activity from the Institute for Supply Management climbed to 53.9 last month from 52.7 in November. Separate measures of production, employment, new orders and exports also jumped, as the first US economic data of the year underlined the resilience of the sector.¶ The figures are the latest evidence that the world's biggest economy has rebounded from the trough reached in the summer, when a reading of 50.6 on the index raised fears that the US was sliding back into recession. A reading of more than 50 on the index signals expansion.¶ "The overall message of the report suggests **durability ahead for US production in the face of likely external headwinds**," said Steve Weiting, an economist at Citigroup.¶ A measure of export orders jumped to 53 from 52, as demand in Asia helped compensate for a weakening in orders from Europe. Encouragement was also taken from a decline in the ISM's inventory index to 47.1 from 48.3 in November, signalling that stronger should demand should feed straight through to higher production.

# 2NC MANUFACTURING RESILIENT

**US Manufacturing strong and growing despite increasing competition**
Skie 12 – Managing principal of manufacturing and distribution in CliftonLarsonAllen LLP, a firm that provides consultation services to different industries (Erik, "Survey Shows Resilient Manufacturing Sector is Adapting to New Environment", CliftonLarsonAllen, 9/6/12, http://www.cliftonlarsonallen.com/Manufacturing/Survey-Shows-Resilient-Manufacturing-Sector-Is-Adapting-to-New-Environment.aspx)//BD
Over the last several decades, U.S. manufacturers have faced an onslaught of challenges that had led many to predict the eventual demise of U.S. manufacturing. As recently as five years ago, the conventional wisdom was that the United States could not compete with the low labor costs in countries like China, Vietnam, and India. In addition, purchasing tactics like those implemented by the "big three" auto companies underscored the perspective that life as a manufacturer would be precarious at best.¶The dynamic shifts in this industry are almost unparalleled in any other sector of our economy. Interestingly, though, in a recent survey of almost 400 small to mid-sized manufacturers across the country, most have returned to financial stability after the Great Recession and are focused on future opportunities.¶Stiff competition has produced a U.S. manufacturing base that **is innovative, adaptable, and resilient in the face of adversity**. Since August 2009, the Institute of Supply Chain Management's (ISM) Manufacturing Production Index (PMI), a measure of manufacturing activity in the United States, has shown expansion for 33 of the past 35 months.

**No link to manufacturing and empirically denied – coal can and has shielded electricity prices from natural gas**
National Coal Council 14 – advisory council that advises the Secretary of Energy and promote the use of coal for energy security and environmental protection ("The Value of Our Existing Coal Fleet", National Coal Council, May 2014, http://www.nationalcoalcouncil.org/NEWS/NCCValueExistingCoalFleet.pdf)//BD
Lower cost electricity acts as a stimulus to the economy, providing more disposable income to ¶ consumers and creating a competitive edge for U.S. manufacturers supplying global markets. ¶ Further evidence of the value of the existing fleet can be seen in a visual comparison of states ¶ that have a large share of electricity generation from coal40 (see Figure B.9), with states that have ¶low retail electricity prices41 (see Figure B.10). ¶Given the importance of electricity to the economy, basic energy policy assessments, such as the ¶Quadrennial Energy Review42 and the President's Advanced Manufacturing Initiatives43 should ¶consider the impact of lower priced electricity facilitated by coal-fired power plants. ¶Just as importantly, coal provides economic stability and has been **a crucial buffer to spiking gas ¶prices.** Over the past decade, natural gas prices have proven volatile indeed. In 2004, gas to ¶produce electricity had doubled in just two years to reach $5.50/thousand cubic feet (mcf).¶viii ¶Then it more than doubled again by 2008 to peak at $12.41/mcf. By 2012, the price dropped to ¶$2.81/mcf and averaged $4.44/mcf in 2013. The average price of gas delivered to electric power ¶plants in January 2014 was $7.21/mcf, 60% higher than the price in January 2013.44 Average ¶annual fuel prices since 2001 and projected future prices are presented in Figures B.11 and B.12. ¶This past winter has demonstrated that large price spikes remain a characteristic of natural gas: ¶• In New England, natural gas prices reached $77/mcf or $435 per barrel in oil equivalent ¶terms, causing the switch from gas to oil power generation.45 ¶• In New York, natural gas prices reached $90/mcf.46 ¶• In the Northwest, spot natural gas at Malin Hub in Oregon quadrupled from $7.70 to ¶almost $30/mcf.47 ¶• Deliveries to the Algonquin Citygates rose to $24.35, gas at

Iroquois Waddington was ¶quoted at $21.70, gas on Tennessee Zone 6 200 L increased to $29.72.48 ¶• The Northern Natural Ventura price reached $43.82.¶Energy supply and price stability are crucial elements in socioeconomic progress. The U.S. is still ¶expanding, both in terms of population and GDP, and will continue to rely on its coal plants to ¶meet electricity demand over the coming decades as the nation's population increases by almost ¶120 million by 2050. (See Figure B.13.) About 90% of the population will be urbanized. ¶Figure B.13. U.S. Population Change. ¶The U.S. will not be able to reliably and affordably meet growing demand without a balanced ¶energy portfolio that includes coal. Coal has traditionally provided a buffer against higher ¶electricity prices, and it could be argued that an expanded coal fleet will be needed to meet the ¶needs of the American people. By 2030 alone, the EIA projects that population will grow by over ¶40 million, GDP will increase by almost 50% and at least 27 million new homes will be built. If ¶electricity demand returns to the pre-recession growth rate, the U.S. would need an additional ¶1,300 TWH by 2030 -- as much as the power consumption of France, Germany and the United ¶Kingdom combined.

**Coal won't be offset by gas – supply, storage, infrastructure, timeframe problems**
National Coal Council 14 – advisory council that advises the Secretary of Energy and promote the use of coal for energy security and environmental protection ("The Value of Our Existing Coal Fleet", National Coal Council, May 2014, http://www.nationalcoalcouncil.org/NEWS/NCCValueExistingCoalFleet.pdf)//BD
In Implications of Greater Reliance on Natural Gas for Electricity Generation (2010),the American ¶Public Power Association (APPA) demonstrated the prohibitive infrastructure cost of replacing ¶coal with gas. ¶• Supply concerns: Just to replace coal power, the U.S. would need an additional 14 trillion ¶cubic feet of gas – equivalent to the combined production of Texas, Louisiana, Oklahoma ¶and the Gulf of Mexico. ¶• Infrastructure concerns: Merely to build the power plants, pipeline system and storage ¶infrastructure necessary to provide reliable gas would require an outlay of over $800 ¶billion (2014 dollars). ¶• It would be physically challenging within any reasonable time frame, given the geology for ¶storage. ¶• Gas price escalation concerns: EIA projects that natural gas will cost $4.77 per million Btu ¶in 2020. The APPA estimates that over the long term it would cost $11/MMBtu (2014 ¶dollars) simply to replace depleting reserves. ¶Continuing to close affordable base load coal generation will not only mean higher electric rates, ¶but also **higher manufacturing costs** and increased heating costs for over 55 million families who ¶heat with gas.

**Multiple barriers to natural gas – regulations, aged infrastructure, constant increasing prices**
National Coal Council 14 – advisory council that advises the Secretary of Energy and promote the use of coal for energy security and environmental protection ("The Value of Our Existing Coal Fleet", National Coal Council, May 2014, http://www.nationalcoalcouncil.org/NEWS/NCCValueExistingCoalFleet.pdf)//BD
Future natural gas prices are uncertain. They could be influenced by environmental regulations ¶ on gas production and its use in power plants, by larger exports of liquified natural gas (LNG) and ¶by the need for expanded pipeline and gas storage infrastructure. Additionally, much of the ¶existing natural gas infrastructure is aging and in need of maintenance. Over half the nation's ¶ pipelines are over 50 years old; the leak rate in gas mains is one every 8 miles per year, and one ¶ leak every 2 miles for services lines.64 EIA's most recent projections for the price of delivered ¶

gas to electric utilities indicate an expected real (constant dollar) increase of 3.1%/year, for ¶ 2012-2040, versus 1.0%/year for coal. It should be noted that past natural gas price projections ¶ have been inaccurate. Figure C.5 shows a retrospective accounting of past EIA projections versus ¶ the actual price of natural gas (the heavy black line in Figure C.5).65 An ability to make accurate ¶ projections of future natural gas prices is relevant to the existing coal fleet, because retirement ¶ decisions for existing coal capacity will rely in part on projected costs for coal and natural gas.

# WARMING ADV

# 1NC NO SOLVENCY

**Pipeline leaks are an alt cause to reducing emissions**

**Weiss 4-24-14-** Senior Fellow and Director of Climate Strategy at the Center for American Progress (Daniel J., "Trade Implication of U.S. Energy Policy and the Export of Liquefied Natural Gas (LNG)," Center for American Progress, http://americanprogress.org/issues/green/report/2014/04/24/88506/trade-implication-of-u-s-energy-policy-and-the-export-of-liquefied-natural-gas-lng/)BC

Save natural gas, create jobs, cut pollution One way to reduce the threat of higher natural gas production, prices, and pollution linked to an increase in LNG exports is to make our natural gas distribution system much more efficient. A report by Sen. Ed Markey (D-MA), "America Pays for Gas Leaks," estimated that the aging network of natural gas pipelines leak significant amounts of natural gas. It determined that: Gas distribution companies in 2011 reported releasing 69 billion cubic feet of natural gas to the atmosphere, almost enough to meet the state of Maine's gas needs for a year and equal to the annual carbon dioxide emissions of about six million automobiles. Gas companies have little incentive to replace these leaky pipes, which span about 91,000 miles across 46 states because they are able to pass along the cost of lost gas to consumers. Nationally, consumers paid at least $20 billion from 2000-2011 for gas that was unaccounted for and never used according to analysis performed for this report.

**Natural gas wont reduce emissions enough to solve CO2**

Michael A. **Levi** (David M. Rubenstein Senior Fellow for Energy and the Environment) August 20, **2012** "The Climate Change Limits of U.S. Natural Gas" http://blogs.cfr.org/levi/2012/08/20/the-climate-change-limits-of-u-s-natural-gas/

The Associated Press reported last week that U.S. greenhouse gas emissions have dropped to a twenty-year low on the back of abundant natural gas. "The question," it correctly observed, "is whether the shift is just one bright spot in a big, gloomy [climate change] picture, or a potentially larger trend." I've argued repeatedly in the past that surging supplies of natural gas are good news for climate change. But there are important limits to what U.S. natural gas can do. This post is going to illustrate those with some simple numbers. Let's start with a reference point. In 2009, in advance of the Copenhagen climate summit, the United States pledged to reduce (PDF) its greenhouse gas emissions to 17 percent below 2005 levels by 2020. It also repeatedly emphasized its intention to reduce those emissions to 30 and 42 percent below 2005 levels by 2025 and 2030 respectively. How far down that road could a shift from coal to gas get the United States? I'm going to focus on carbon dioxide emissions from energy. The EIA currently projects that U.S. emissions will be 5,429 million metric tons of carbon dioxide ($MtCO_2$) by 2020, assuming that currently pending fuel economy rules for 2017-25 go ahead as planned. 1,787 $MtCO_2$of that total would come from coal; 1,371 would come from natural gas. That already reflects a gradual substitution of gas for coal. But what would happen if natural gas completely replaced coal? Assume that the emissions from gas are about half those from coal. Then U.S. emissions would drop to 4,536 $MtCO_2$. That's 24 percent below 2005 levels. That leads to our first conclusion: substituting natural gas for coal has the theoretical potential to get us to our 2020 carbon goals. But, unless we deploy it with carbon capture and sequestration, it cannot get us to our 2025 or 2030 goals. (The 2025 and 2030 comparisons require a little bit of extra math that I won't go through here.) One can push this a bit farther, supposing that natural gas completely replaced oil in residential, commercial, and industrial applications. Oil use in those three sectors is projected to generate 462 $MtCO_2$ in 2020; replacing oil with natural gas could in principle reduce those emissions by somewhere around 150 $MtCO_2$. That doesn't change our bottom-line conclusions. But we're not done. These figures are extreme limits that assume spectacular gains in natural gas use. Alas those gains aren't practical. Focus on the coal-to-gas shift. I estimated that a complete replacement of coal with natural gas could slice 894 $MtCO_2$ off of U.S. emissions. You need to burn about 18.2 Mcf (thousand cubic feet) of natural gas to generate a ton of greenhouse gas emissions. This implies that completely replacing U.S. coal with natural gas would require roughly 16 trillion cubic feet (Tcf) of additional natural gas. That's a 60 percent increment to projected natural gas supplies in 2020. Put another way, it's more than double the amount of natural gas currently used in U.S. power plants. This is almost certainly not a practical addition to U.S. natural gas production. Perhaps a more reasonable (but still challenging) outer limit would see half of the U.S. coal use currently anticipated for 2020 replaced with natural gas. That would result in U.S. emissions 17 percent below 2005 levels, meeting the strict part of the Copenhagen commitment but leaving a big lift for other shifts to deliver on the follow-on targets. The bottom line? Natural gas can do a lot to bend the U.S. emissions curve over the coming years. In even

the medium run, though, simply moving from coal to gas is not a substitute for broader policy, at least not if the United States wants to realize the sorts of emissions cuts that both Barack Obama and John McCain talked about only four years ago. Best to think of gas as a climate opportunity – to forestall construction of long-lived and highly polluting infrastructure, to make carbon capture and sequestration cheaper, to balance intermittent renewable sources – rather than as a solution in itself.

# 1NC ARCTIC WARMING TURN

**Drilling in the Arctic causes warming-black carbon and natural gas emissions**

**Walsh 12** (Brian Walsh, July 20th 2012, writer for Time Magazine, "It's Not Just Spills—the Climate Risks of Arctic Drilling," http://science.time.com/2012/07/20/its-not-just-spills-the-climate-risks-of-arctic-drilling/)//RTF

Royal Dutch Shell is set to begin drilling in the Arctic waters off Alaska beginning next month, assuming the Obama Administrations doesn't hold off on needed permits at the last-minute. (With President Obama fighting for re-election—and fighting the charge that he's anti-energy—don't bet on it.) That has environmentalists extremely unhappy. As global warming—ironically—opens up once-iced over parts of the Arctic waters to drilling rigs, greens worry that a spill in the hostile environment of the far North is as inevitable as it would be devastating. Shell and other oil companies interested in the Arctic argue that they'll be taking extra precautions in the Arctic, and note that they'll be drilling shallow, low-pressure wells that are less likely to blow out than the deepwater well that caused BP's 2010 Gulf oil spill. But a new report by the NGO Clean Air Task Force (CATF) shows that an oil spill isn't the only risk that Arctic drilling poses to the environment. Methane and black carbon, two potent greenhouses gases, will likely be emitted in significant amounts if drilling in the Arctic proves as lucrative as many oil companies are hoping for. Exactly how much additional greenhouse gas will be released by the production of Arctic oil isn't clear—and depends on whether drillers and regulators take steps to reduce the warming side effects of drilling. "It's ironic that climate change has led to the opening of the Arctic for drilling, but we aren't paying much attention to the climate change that drilling will help cause," says Jonathan Banks, senior climate policy advisor for CATF and the author of the report. (MORE: Black Gold on the Last Frontier) The main problem isn't the oil itself—although, of course, if the 90 billion barrels of oil believed to be obtainable in the Arctic are burned in cars or trucks, the carbon released will help undoubtedly help intensify climate change. It's chiefly the natural gas that will be produced along with that oil. Natural gas is essentially methane—and methane is a powerful, albeit short-lived greenhouse gas, with more than 20 times the warming potential of plain old carbon dioxide. By some estimates, there's as much as 1.7 trillion cubic ft. of natural gas to be found in the Arctic. But companies like Shell aren't braving the elements in the Arctic to bring back natural gas. They're there for the oil, which is worth far more—and not incidentally, is a lot easier to store and transport than gas. Natural gas either needs a pipeline network that can allow it to be shipped from the well to a consumer, or it needs to be cooled to super-low temperatures, after which it can be shipped on an LNG tanker. (Oil, by contrast, can be loaded without any intermediary steps onto a tanker.) There are neither many pipelines nor many LNG facilities in the far North, which means it's not easy nor cheap for oil companies to actually do anything with the natural gas they'll be producing alongside all that lovely oil. "The race in the Arctic is about the oil," says Banks. "But the gas that goes along with it can be a huge source of carbon." Ideally oil companies would capture the natural gas and ship it, either by LNG tanker or pipeline. But that's not likely given the current energy infrastructure—or lack of it—in the Arctic. Fortunately the gas won't simply be released into the air—methane is highly combustible, and uncontrollable amounts combustible gas is not something a drilling rig like simply floating around. (See Horizon, Deepwater.) Instead, the next best option is to burn the gas in a controlled process, also known as flaring. Flaring reduces the amount of pure methane reaching the atmosphere, but it can also produce other pollutants—including black carbon, otherwise known as soot. (MORE: Google Street View Goes to Antarctica) Black carbon can have a double warming effect. As its name suggests, it warms the atmosphere directly by intensifying the greenhouse effect, just as carbon dioxide does. But as black carbon settles on the snow and ice of the Arctic, it darkens the ground—and that in turn causes the surface to absorb solar energy it would have otherwise reflected back into space. (It's the albedo effect, which you'll hopefully remember from 7th grade science class, or at the very least, from the last time you wore a black T-shirt during a hot day.) The albedo of the Arctic is already shifting as sea ice melts, opening up new stretches of dark water to sunlight—the same water in which oil companies will be drilling in the years to come. Black carbon produced by those rigs will only make climate change in the Arctic—where temperatures have increased by 2 to 3 C over the past 50 years—even worse. So what can be done to make drilling in the Arctic a little more climate-friendly? The CATF report outlines a number of mitigation routes, ranging from vapor recovery units that reduce emissions from vented methane to tighter valves that prevent fugitive emissions to the use of ultra-low sulfur diesel fuel, which cuts black carbon. But mitigation is almost certainly going to require regulation, which will vary in the Arctic. Countries like Norway generally keep a tight hold on their oil industry; countries like Russia, somewhat less so. The U.S. falls in the middle, though it's notable that regulatory authority is passing from the Environmental Protection Agency to the Department of Interior over time. But regulation is needed. "The potential is here for [production] to be a significant source of greenhouse gases," says Banks. If oil companies really are going to drill the Arctic, the very least they can do is take every precaution possible, at every stage of the process.

# 2NC ARCTIC WARMING TURN

## Arctic drilling causes warming- Methane and Black Carbon emissions

**CATF 4/30** (Clean Air Task Force, 4/30/14, "Arctic drilling Must Protect the Climate," http://www.catf.us/blogs/ahead/2012/04/30/arctic-drilling-must-protect-the-climate/)//RTF

Two years ago the world turned its attention to the Gulf of Mexico and the tragedy that was unfolding there, with the explosion of the Deepwater Horizon drilling platform. This disaster brought a reinvigorated focus to the safety of offshore drilling, but the term safety must now be understood to not just cover spills and leaks, but also the impacts that drilling has on the climate, especially when done in the fragile environment of the Arctic. It is well understood that carbon dioxide emissions from fossil fuel combustion in our cars and power plants are responsible for the majority of earth's global warming. Less appreciated, though, is that methane emissions account for nearly half as much of the warming we are currently experiencing as carbon dioxide. The oil and natural gas industries are the largest source of methane emissions from the US. Oil and gas extraction can also be significant sources of black carbon, another potent climate pollutant. Changing technology and climate change itself, with receding Arctic ice, have made oil and gas production activities in the Arctic region more feasible. This trend is expected to accelerate, with the potential for vastly more methane and black carbon emissions. According to the United States Geological Survey (USGS), the Arctic holds one-fifth of the world's undiscovered, recoverable oil and natural gas. As the ice retreats, oil and gas developers are moving in to exploit previously hard-to-access resources. Melting has also enabled increased shipping activity through the region, further elevating concerns over emissions in the region. The Arctic is particularly vulnerable to climate change impacts, where, according to the Intergovernmental Panel on Global Climate Change (IPCC), Arctic temperatures have increased at about twice the global average rate over the past 100 years. September 2011 represented the largest retreat of Arctic sea ice on record, opening wider the fabled Northwest Passage to ship traffic. Methane is an extremely potent climate pollutant, packing 25 times the punch of carbon dioxide when compared over a 100-year lifetime and 72 times its potency over a 20-year lifetime. Natural gas and oil production is one of the largest human-caused sources of methane, representing 20% of global anthropogenic methane emissions. Black carbon too, punches above its weight as a climate pollutant, but its major impact in the Arctic is hastening melting by depositing heat-absorbing black soot on white ice surfaces. Emissions from gas flaring, diesel engines, and shipping associated with gas and oil operations also represent potentially large in-region sources of black carbon. If oil and gas production is to occur in the Arctic, we must ensure that emissions of $CO_2$, methane and black carbon are held to a bare minimum. While oil production is the primary focus of current exploration and production activities due to high oil prices, natural gas is almost always produced along with oil, posing the problem of what to do with it. Crude oil usually contains some amount of "associated" natural gas that is dissolved in the oil or exists as a cap of free gas above the oil in the geological formation. In some cases, this represents a large volume of gas. For example, nearly 3 trillion cubic feet (Tcf) per year of gas is produced in association with oil in Alaska. The largest potential source (but by no means the only) of either methane or black carbon from oil production is the disposition of this "associated" natural gas. When pipelines are available, the natural gas can be delivered to industrial, commercial and residential consumers. If there is no pipeline to bring the gas to market and no local use for the gas, then the "stranded" gas has little economic value and is often flared. While flaring the associated gas destroys most of the methane, it also creates a large source of $CO_2$ and can create black carbon. Estimates of the volume of associated gas flared are substantial, with estimates showing as much as 5.3 trillion cubic feet of gas being flared each year. That's about 25 percent of the US's annual natural gas consumption. This leads to the release of approximately 400 million tons of $CO_2$ per year, the equivalent to the emissions from over 70 million cars. Fortunately, technologies and best practices exist to reduce the impact of oil and gas production. If we are going to extract the oil from the Arctic, we must do it in a way that does not exacerbate the very real problem that climate change is already posing there. In order to do so, the US should take the lead in ensuring that only the best practices are acceptable when it comes to Arctic exploration and drilling. The technologies and practices below can dramatically reduce the emissions associated with oil and natural gas, in some cases by 100%. First, we need better characterization of emissions in the region, and better monitoring and reporting information. Methane and black carbon emissions from oil and natural gas production, especially in the Arctic, are not well characterized. Establishing standardized monitoring and reporting protocols, backed by legislation, is essential to quantifying these emissions and then adopting the best mitigation techniques. Second, we must deal with the methane and black carbon from associated gas and well completions. This means capturing all associated and completion gas (i.e., no venting). Where feasible, all gas should be sent to consumers through pipelines or LNG or beneficially consumed on-site or locally (for power generation or thermal or feedstock uses). Or, where geologically feasible, we should require reinjection of the gas into underground reservoirs. When there is no reasonable alternative to flaring, we should require the use of efficient flares. Next, we need to deal with vented and fugitive methane emissions. Here we need vapor recovery units on storage, process tanks and floating production, storage and offloading units. Operators should use compressed air or electric control systems rather than pneumatic controllers, mitigation of methane emissions from all dehydrators should be required, and the use of wet seal compressors without gas capture systems should be prohibited. To detect leaks and equipment failures, we should require inspection and maintenance programs for all facilities operating in the Arctic. Finally, for the mitigation of black carbon emissions, we should require ultra low sulfur diesel (ULSD) and Diesel Particulate Filters (DPF) for all stationary engines and small ships – either new or retrofit. And we should push to establish International Maritime Organization requirements for BC emission reductions for international shipping affecting the Arctic. The opening of the Arctic to increased oil and gas development is a cause for concern. The Arctic is already being

hammered by climate change and other environmental impacts. If we are on the verge of an Arctic oil and gas rush, this will only add to the issues facing this fragile environment. If we implement the above policies domestically, and pressure our other Arctic neighbors to do the same, we will greatly reduce, but certainly not eliminate, the air and climate impacts of oil and gas development in the Arctic.

## Arctic drilling risks massively accelerated warming

**Romm 13** (Joseph, 3/25/13, Senior Fellow at American Progress, "The Climate Consequences of Arctic Oil Drilling," http://theenergycollective.com/josephromm/201881/adding-fuel-fire-climate-consequences-arctic-ocean-drilling)//RTF

In order to avoid the catastrophic consequences of climate change, enormous fossil-fuel reserves will need to remain in the ground untouched. 2012 was supposed to be a banner year for Royal Dutch Shell, as the company planned to embark on the first Arctic offshore exploratory drilling activity in decades and set itself up to make billions of dollars prospecting for oil in the far-flung region off Alaska's North Slope. But that's not how things turned out. Instead, beginning with efforts to prepare for operations, the company experienced one setback after another. Shell struggled to meet the government's safety requirements for its oil spill response equipment, experiencing multiple technical failures and permit violations. Mother Nature weighed in and kept the drilling sites choked with sea ice. Yet despite these setbacks and others, Shell received permits from the federal government in August to begin preparatory drilling, albeit not deep enough to actually strike oil in Alaska's Beaufort and Chukchi Seas. The coup de grace came on New Year's Eve when Shell's Kulluk rig ran aground near Kodiak, Alaska — a fiasco that required a 500-plus person response effort, led by the Coast Guard, working for more than a week in dangerous conditions to secure the rig. This final calamity prompted the Obama administration to launch a high-level 60-day review of Shell's entire Arctic drilling program, and after assessing its equipment and determining that both Arctic drilling rigs were too damaged to operate in 2012, caused Shell to announce on February 27 that it would not seek to drill in the remote and challenging region in 2013. In presenting the results of the Department of the Interior's review on March 14, outgoing Secretary of the Interior Ken Salazar admitted, "The government still has a lot to learn. The Arctic is a very difficult environment to operate in. … Shell is one of the most resource-capable companies in the world (and) they encountered a whole host of problems in trying to operate up there." The review concluded that Shell would have to develop a "comprehensive plan" for its operations before it would be allowed to move forward. This begs the question: What exactly did the permit process consist of before all these mishaps? Shell spent seven years and an estimated $5 billion getting ready for its chance to tap the reserves of fossil fuels thought to be stashed beneath the Arctic seabed, and the result was irrefutably a failure. Neither the oil and gas industry nor its regulators are adequately prepared for Arctic offshore drilling operations. Furthermore, climate change is already wreaking havoc in the region, melting it at an alarming rate and setting off a domino effect that will ripple through the entire global system. The trends so plainly on display in the Arctic are merely a preview of what awaits the rest of the planet if serious action isn't taken soon to aggressively curb our carbon emissions. If we allow corporate interests to tap the reserves of additional fossil fuels that have been exposed by the rapid onset of global climate change, we're missing the clear message about the future of our environment on a planetary scale. Slowing the devastating steamroll of climate change requires slashing the amount of greenhouse gases we put into the atmosphere, not opening up vast new sources of carbon. In President Barack Obama's most recent State of the Union address, he reiterated his commitment to addressing the urgency of climate change for the sake of future generations. The president's will, however, is matched by the utter intransigence of Congress and what has been called the most anti-environmental House of Representatives in history. Looking forward, the Obama administration will face some big decisions early on in the second term: the fate of the controversial Keystone XL pipeline, regulating pollution from existing coal-fired power plants, and whether or not to move forward with offshore drilling in the fragile Arctic. America's Arctic outer continental shelf will be undisturbed by drilling rigs in 2013, but the battle over oil and gas exploration in its frigid waters is far from over. Shell made clear that it sees this latest announcement to pause operations as a hiatus, not a cancellation of its plans to tap the Arctic Ocean's reserves. Marvin Odum, Shell's director of Upstream Americas, said, "Our decision to pause in 2013 will give us time to ensure the readiness of all our equipment and people following the drilling season in 2012." The Obama administration will also need to decide on ConocoPhillips' applications to begin exploratory drilling in 2014. The company said its plans remain on track and it will submit remaining information to the Department of the Interior this spring, despite Shell's problem-filled year. As CAP's John Podesta and Carol Browner articulated in a recent Bloomberg op-ed, Shell's string of mishaps and failures provide overwhelming evidence that the oil and gas industry is not prepared for the enormous challenge and incalculable risk that accompanies any operations in the Arctic. In light of that reality, they wrote, "The Obama administration shouldn't issue any new permits to Shell this year and should suspend all action on other companies' applications to drill in this remote and unpredictable region." Below we examine in further detail the risks and potential consequences of offshore drilling in the Arctic region. The multiple risks of Arctic offshore drilling Regardless of the company and its individual preparations, there are multiple risks inherent in industrializing one of the few remaining unspoiled corners of the planet. Infrastructure The area around planned drilling sites in the Beaufort and Chukchi Seas lacks even the basic infrastructure necessary to mount a large-scale response to an oil spill or other major incident – such as roads, major airports, ports, hospitals, and adequate facilities to house and feed responders. The nearest permanent Coast Guard facility is more than 1,000 miles away in Kodiak, Alaska, and the United States currently operates just one functional icebreaking vessel, used mainly for scientific missions. Not only does the Arctic have inadequate infrastructure to deal with an oil spill, but also response technologies in such extreme environmental conditions remain untested and unproven. A 2012 independent report by the Government Accountability Office identified a slew of environmental, logistical, and technical challenges associated with Arctic offshore drilling and concluded that Shell's "dedicated capabilities do not completely mitigate some of the environmental and logistical risks associated with the remoteness and environment of the region." Weather Extreme and unpredictable weather conditions complicate transportation, preparedness, operations, and cleanup of spilled oil to an even greater degree. As the National Commission on the BP

Deepwater Horizon Oil Spill and Offshore Drilling stated in its January 2011 final report: The Alaskan Arctic is characterized by extreme cold, extended seasons of darkness, hurricane-strength storms, and pervasive fog — all affecting access and working conditions. The Chukchi and Beaufort Seas are covered by varying forms of ice for eight to nine months a year. These conditions limit exploratory drilling and many other activities to the summer months. The icy conditions during the rest of the year pose severe challenges for oil and gas operations and scientific research. And oil spill response efforts are complicated year-round by the remote location and the presence of ice, at all phases of exploration and possible production. Scientific knowledge Largely untouched by industrial activity, much of the Arctic region remains a mystery. The area is home to numerous indigenous communities that have subsisted for centuries in the harshest surroundings our planet has to offer. It also serves as a habitat for some of the most rare and fragile species on the planet. Any drilling activity in the region would be operating without sufficient scientific knowledge to determine the potential effects of operations on the already fragile ecosystem. A 2010 report released by the U.S. Geological Survey identified major gaps in Arctic science and research, emphasizing that "significant questions" remain regarding the scientific and technical information needed to adequately prepare for drilling in the challenging Arctic environment. An independent review commissioned by the Pew Environment Group and Ocean Conservancy in 2011 took the Geological Survey analysis a step further, recommending concrete next steps — such as developing a comprehensive research and monitoring plan and setting aside significant areas for protection — that should be taken before moving forward with potentially damaging industrial activity in the region. Responding to these risks The inaccessibility and incomparably harsh weather conditions add a major liability to potential operations, and the private sector has taken notice. Insurance giant Lloyd's of London issued a report warning companies that responding to an oil spill in a region "highly sensitive to damage" would present "multiple obstacles, which together constitute a unique and hard-to-manage risk." German bank WestLB also announced last year that it would refuse financing to any offshore oil and gas drilling in the region because "the risks and cost are simply too high." And Total S.A., the fifth-largest oil and gas company in the world, announced that it wouldn't seek to drill in the Arctic because an accident there would be a "disaster." Despite these concerns, and after multiple delays due to the erratic weather and failure to receive Coast Guard certification of its oil spill response barge, Shell received approval from the Department of the Interior to drill two preparatory wells in the Arctic Ocean last summer. Though the two "top holes" were completed without incident, the operations surrounding Shell's Arctic program were nothing short of a disaster. The company twice lost control of its Arctic drilling rigs, had its oil spill response equipment "crushed like a beer can" in tests in Puget Sound, and was cited for multiple safety and environmental violations — now the subject of an investigation that the Coast Guard handed over to the Department of Justice to assess potential civil or criminal charges. After watching Shell's string of mishaps from the sidelines, Norway-based oil and gas company Statoil said two weeks ago that it would consider walking away from its Arctic offshore leases if exploration proves too risky and expensive. Tim Dodson, Statoil's executive vice president of global exploration, acknowledged the numerous challenges associated with Arctic offshore drilling and reiterated his company's cautious approach to exploration in the region, saying, "We've [said] we wouldn't drill before 2015. Whether that means we drill in 2015, or maybe not until 2016 or whether we'd drill at all, I think maybe the jury's still a little bit out on that." Shell's multiple failures and the concern expressed by fellow corporations illustrate how the current level of risk in Arctic offshore drilling outweighs the potential reward. The amount of time and money Shell has invested so far is just a down payment on the massive investment that would be required to build the infrastructure necessary to get the oil to market and turn a profit on estimated reserves. This has led analysts to wonder whether the current boom in production of natural gas and its subsequent effect on energy prices will render Arctic offshore prospects uneconomic in the near future. Nick Butler, former group vice president of strategy and policy development at BP, wrote in the Financial Times last September that regardless of Shell's investment, "No amount of technical excellence can transform the economics of a project which is at the outer limit of commercial viability." If Shell were to abandon its Arctic project, Butler continues, it "would not be an admission of technical failure, nor an act of submission to the environmentalists. It would be a statement of commercial common sense." The climate factor The prospect of industrializing the fragile Arctic becomes even riskier when examined in the context of climate change. The Arctic region is feeling the devastating effects of climate change more than anywhere else on the planet, undergoing an alarming transformation as it warms at about twice the rate of the rest of the globe. The rapid rate of change means our baseline of scientific knowledge about the region is constantly shifting, further complicating the ability to make informed decisions regarding industrial activity in the region, including oil and gas development, fishing, shipping, and tourism. The National Oceanic and Atmospheric Administration's 2012 Arctic Report Card documented a very grim year for the region and found "strong evidence of widespread, sustained change driving Arctic environmental system into new state," including record-low sea ice extent, record ice sheet surface melting in Greenland, record-high permafrost temperature, and record-low snow extent. Moreover, the region's rapid loss of snow and ice has a snowball effect that speeds melting: The decrease in sea ice cover, snow cover, glaciers, and Greenland ice sheet means that the bright, white surfaces that reflect summer sunlight are being replaced by darker surfaces — ocean and land — that absorb sunlight. These conditions increase the capacity to store heat within the Arctic system, which induces more melting — a positive feedback. Another feedback response exists in the thawing tundra — melting permafrost also accelerates warming by releasing a frozen cache of carbon into the atmosphere that will likely add 0.4 degrees Fahrenheit to 1.5 degrees Fahrenheit to total global warming by 2100.34 According to a November 2012 United Nations Environment Programme report, the frozen organic matter that exists in permafrost contains almost twice as much carbon than is currently present in the atmosphere. If that organic material were to thaw, then it would subsequently decay, releasing large amounts of carbon dioxide and methane into the atmosphere and amplifying the warming already underway. Black carbon, a component of fine particle pollution that is emitted through a variety of combustion processes, has also been identified as a significant factor contributing to observed and projected rates of Arctic climate change. As an aerosol, black carbon absorbs incoming solar radiation, heating the atmosphere and contributing to overall global and Arctic warming. When deposited onto Arctic ice and snow, it darkens the surface, increasing the absorption of radiation. While countries in close proximity to the Arctic have used better controls on air pollution to reduce black carbon emissions, increased industrial activity in the Arctic could reverse this trend. Lastly, the current rate of carbon dioxide emissions from human activity promises — in addition to its effect on climate — to drastically change the biological and chemical processes that occur in our oceans. Confirming this trend, the Intergovernmental Panel on Climate Change's 2007 report concluded that if carbon dioxide emissions are not

constrained, we can expect the average acidity of our oceans to increase by 100 percent to 150 percent by 2100. The Arctic is particularly vulnerable to ocean acidification due to its cooler water and low salinity. Cooler water allows for carbon dioxide to be dissolved more quickly into the Arctic Ocean, while lower salinity reduces the ability of the ocean to buffer against acidification. Because of these factors, if current rates of carbon dioxide emissions are left unconstrained, the acidity of the Arctic Ocean will rise sharply. Accelerating the feedback loop Ironically, the dramatic changes experienced throughout the Arctic — many of which are the result of man-made climate change — are unlocking massive fossil-fuel reserves which, when burned, would only accelerate the destructive cycle of unchecked emissions and warming. The 2009 Copenhagen Accord, supported by the United States and more than 100 other nations, formally recognized that global warming must be held below 2 degrees Celsius, requiring "deep cuts in carbon emissions" in order to do so. Recent studies, however, show that the current global rate of emissions has us on a trajectory to blow past that threshold, exposing humanity to the most calamitous consequences of climate change. A World Bank report released late last year, for example, carried the dire warning that we're on track for a 4 degrees Celsius warmer world by as soon as 2060 — a catastrophic scenario "marked by extreme heat-waves, declining global food stocks, loss of ecosystems and biodiversity, and life-threatening sea level rise." As climate activist Bill McKibben wrote in a must-read Rolling Stone piece last year, to put this level of warming in context: So far, we've raised the average temperature of the planet just under 0.8 degrees Celsius, and that has caused far more damage than most scientists expected. (A third of summer sea ice in the Arctic is gone, the oceans are 30 percent more acidic, and since warm air holds more water vapor than cold, the atmosphere over the oceans is a shocking five percent wetter, loading the dice for devastating floods.) The November iteration of the International Energy Agency's annual World Energy Outlook report made headlines for projecting that the United States could become the world's largest oil producer by 2020. The much bigger story, however, was their warning that more than two-thirds of the world's proven fossil-fuel reserves need to still be in the ground in 2050 in order to limit global warming to 2 degrees Celsius and prevent catastrophic climate change. The Arctic region is believed to contain 13 percent of the world's undiscovered oil and 30 percent of its natural gas, according to the U.S. Geological Survey. Developing these reserves — and unlocking the massive "carbon bomb" they represent — is an irrational and dangerous response to the reality of global climate change. Not only does it put the remote and undeveloped region at risk for a potentially devastating oil spill, but it feeds the positive feedback loop of carbon emissions and climate destruction. In a recent Ecofys report ranking the planned fossil fuel projects that would be most dangerous for the climate, oil and gas drilling in the broader Arctic region came in at number three, with the potential to add more than 31 billion metric tons of additional $CO_2$ into the atmosphere by 2050. In the Alaskan Arctic alone, U.S. Geological Survey estimates of the oil and gas recoverable there equate to nearly 16 billion metric tons of $CO_2$ when burned — approximately double China's entire 2009 greenhouse gas emissions. And the potential climate impacts aren't limited to just oil and gas consumption. A recent report from the Clean Air Task Force found that substantial climate impacts could come from the production stage as well, unless companies take meaningful steps to minimize them. Otherwise, methane and black carbon will likely be emitted in significant amounts if drilling in the Arctic proves as lucrative as many oil companies hope it will be. In order to avoid the catastrophic consequences of climate change, enormous fossil-fuel reserves will need to remain in the ground untouched. Quite simply, serious climate action is incompatible with expanding fossil-fuel production. Why the melting Arctic matters The ramifications of the melting Arctic aren't contained in that faraway part of the world. Instead, the devastating impact of climate change in the Arctic has tremendous ripple effects throughout the entire global system. As Jane Lubchenco, the administrator of the National Oceanic and Atmospheric Administration in President Obama's first term, succinctly put it, "What happens in the Arctic doesn't stay in the Arctic." The unprecedented melting of the Greenland ice sheet, for example, has extremely serious implications for global sea-level rise. The summer melt from Greenland in 2012 alone added a millimeter to global sea level. As journalist Chris Mooney explains, "Not only is that millimeter felt around the globe, but it is felt in specific places. For instance, it rode atop the wall of water that Superstorm Sandy pushed inland at New York and New Jersey." If Greenland continues its rapid melting, it could wreak havoc on coastal communities around the globe in the form of coastal flooding and storm surges. What's more, the "Arctic amplification" explained above not only accelerates warming within the region, but it may also be increasing the frequency of extreme weather events in the United States. A recent report led by the National Oceanic and Atmospheric Administration found that enhanced warming of the Arctic alters the jet stream, and these shifts in winds not only affect weather patterns throughout the Arctic, but are also thought to influence weather in Greenland, the United States, and Western Europe. The researchers stated that "With more solar energy going into the Arctic Ocean because of lost ice, there is reason to expect more extreme weather events, such as heavy snowfall, heat waves, and flooding in North America and Europe." New analysis by researchers from Cornell University and Rutgers University confirms this theory, finding the confluence of events that created the unprecedented superstorm Sandy may not have been a freak occurrence, but one fueled by the record-breaking Arctic sea ice melt. According to a summary of the research: … the severe loss of summertime Arctic sea ice—attributed to greenhouse warming — appears to enhance Northern Hemisphere jet stream meandering, intensify Arctic air mass invasions toward middle latitudes, and increase the frequency of atmospheric blocking events like the one that steered Hurricane Sandy west into the densely populated New York City area. The combination of increased sea levels and altered weather patterns as a result of the rapid melting of the Arctic carries severe consequences for densely populated areas, including our own backyard. As top NASA climatologist James Hansen bluntly explained, "If the world allows a substantial fraction of the Greenland ice sheet to disintegrate, all hell breaks loose for eastern North America and Europe." Conclusion Climate change is permanently altering the Arctic region, and the results are startling. As ecosystems unravel, fragile species such as polar bears are struggling to survive, shorelines are eroding, waters are becoming increasingly acidic, snow and ice are vanishing at an alarming rate, and storms are more severe and unpredictable than ever before. At the heart of the problem, however, lies human activity — our addiction to fossil fuels. As Jason Box, Greenland expert at the Byrd Polar Research Center, explains, "Those who claim it's all cycles just don't understand that humans are driving the cycle right now, and for the foreseeable future." Rather than respond to this crisis with serious policies to significantly and swiftly reduce our carbon emissions, governments with jurisdiction over the Arctic have taken the reckless approach of moving forward with plans to exploit the newly accessible fossil fuels and accelerate the destruction. Decisions regarding whether to allow potentially destructive industrial activity, such as oil and gas development, in this fragile environment cannot be examined independently from the climate crisis they will perpetuate. Taking serious action to curb the devastating effects of climate change means we must aggressively deploy clean technologies, internalize the actual price of pollution by putting a price on carbon, and make major investments in climate resiliency. The time for piecemeal solutions has passed and there is no room in the equation for major expansions in fossil-fuel production.

## Arctic drilling means pushing climate change past the tipping point

**Banerjee 9/7** (Subhankar, 9/7/13, Founder, ClimateStoryTellers.org, “Destabilization of Arctic Sea Ice Would Be Game Over for Climate,” http://www.huffingtonpost.com/subhankar-banerjee/destabilization-of-arctic_b_4000445.html)//RTF

The Arctic sea ice is the most famous visual indicator of climate change. This year the climate deniers took the lead to explain what's going on with the Arctic sea ice. "And now it's global COOLING! Record return of Arctic ice cap as it grows by 60 percent in a year," by David Rose in the Mail on Sunday, and "Global warming? No, actually we're cooling, claim scientists" by Hayley Dixon in the Telegraph -- both published on September 8 -- led the parade. Quoting all these irresponsible disinformation, on September 10, Greg Gutfeld of Fox News put an end to global warming with these words: "Global warming? Yes, it's finally dead." Soon I'll get to the science of Arctic sea ice. But first a few words about "climate zombies." Last year I participated as a panelist in The Anthropocene: Planet Earth in the Age of Humans symposium at the Smithsonian in Washington, D.C. I was on the panel "Energizing the Anthropocene: Science for Smart Decisions" with eminent climate scientist Dr. Richard Alley. Richard first gave a long view of global warming, and then provided a road map of how with a $1 trillion investment, the U.S. can move away from fossil fuels entirely. He is a great communicator of climate science, especially when it comes to debunking the deniers' bogus claims. I'll pull some quotes from a talk he gave earlier this year in June at an American Geophysical Union-Chapman conference "Communicating Climate Science: A Historic Look to the Future" at the Snow Mountain Ranch in Granby, Colorado. His remarkable solo act is a journey through his own life and explains in less than three minutes -- how climate zombies can survive on this earth, and keep reappearing. 2013-09-27-seaicehp.jpgRichard Alley (June 2013): This particular climate zombie is back in force again. While warming continued, the "global warming stopped" had a new birth of noise. Then he shows a map of global temperature data from 1957 to now, from the Goddard Institute of Space Studies. RA: "Is it getting warmer? Yes. If you take a long enough interval, it's up." He then explains how the climate zombies can keep saying -- global warming stopped, it's cooling. RA: "I was born in 1957. There is the data from 1957 up to a little later. The regression line through the data, and you can see I was born -- at the start of a cooling trend." RA: "I married my dear wife Cindy in 1980. We got married -- at the start of a cooling trend." RA: "We moved to Penn State in 1988 -- at the start of a cooling trend." RA: "We came here to show our daughters the mountains here [in Colorado] in 1997 -- at the start of a cooling trend." RA: "They named a glacier after me in 2002 -- at the start of a short but steep cooling trend." RA: "Our daughter became a Penn Stater in 2005 -- at the start of a cooling trend." RA: "So my whole life...[big laugh]" When you look at the map you see that the temperature steadily went up from 1957 till now, but had many local minima that Richard Alley refers to as "start of a cooling trend." He then gives an astute career advice to aspiring climate zombies. RA: "If there is a year of rapid warming, shut up! And then you can go right back to claiming global warming stopped, until the next rapid warming, then shut up, then go right back to claiming global warming stopped... ad infinitum!" This time the Arctic sea ice reporting by the climate zombies was quickly debunked: "No, the World Isn't Cooling" by Phil Plait on Slate, "No, Arctic Sea Ice Has not Recovered, Scientists Say" by Andrew Freedman on Climate Central, and "With Climate Journalism Like This, Who Needs Fiction?" by Tom Yulsman on Discover Magazine are just a few examples. "[Arctic sea ice extent] certainly is continuing the long-term decline," Julienne Stroeve, a scientist at the National Snow and Ice Data Center in Boulder was quoted in a Guardian article. "We are looking at long-term changes and there are going to be bumps and wiggles along the long-term declining trend, but all the climate models are showing that we are eventually going to lose all of that summer sea ice." According to the NSIDC the 1979 to 2000 average of the minimum Arctic sea ice extent was 2.59 million square miles, 2007 (1.61), 2008 (1.77), 2009 (1.98), 2010 (1.79), 2011 (1.67), 2012 (1.32), 2013 (1.97). You can see that in two successive years, 2008 and 2009 the number went up a bit from 2007, but then three years in a row, starting in 2010 it went down reaching the lowest ever recorded in 2012, and now it's back up a bit but still 24 percent less than the 1979-2000 average. This is what Julienne Stroeve refers to as "bumps and wiggles along the long-term declining trend." But the most worrisome part of Stroeve's statement is that "we are eventually going to lose all of that summer sea ice." When that happens, life on earth will be in very serious trouble. So we need to understand all aspects of the significance of the Arctic sea ice and why we shouldn't contribute further to its disintegration. The enormous white surface of the Arctic sea ice reflects back solar radiation. But when the sea ice is replaced by dark water it does the reverse, absorbs solar radiation, which in turn contributes to the melting of the Greenland Ice Sheet (which would raise the sea level), thawing of permafrost on tundra (which would release methane trapped in soil), and destabilization of the subsea permafrost (which would release methane trapped in methane hydrates or clathrates). Methane as a greenhouse gas is 72 times more potent than carbon dioxide over a 20-year period. A complete loss of summer sea ice could potentially release huge amount of Arctic methane that might lead to a catastrophic climate change event, even possibly akin to the end-Permian extinction 252 million years ago that wiped out more than 90 percent of life on earth. So our goal should be -- to not add salt to the injury. Dr. James Hansen has repeatedly warned that if Canada's tar sands were fully exploited it would be "game over" for the climate. A complete destabilization of the Arctic sea ice would also be -- game over for the climate. Unfortunately, the Obama administration's National Strategy for the Arctic Region that was released in May is a disaster in the making. The document states: "The region holds sizable proved and potential oil and natural gas resources that will likely continue to provide valuable supplies to meet U.S. energy needs." It's referring to the oil and gas that sits underneath the Arctic seabed in the Beaufort and Chukchi seas of Alaska. In 2012, the Obama administration ignored science and all concerns of the indigenous Iñupiat communities, and gave Shell the approval to begin exploratory drilling (only top-hole drilling and not to penetrate the oil bearing zones) in the Beaufort and Chukchi seas. In February, Shell announced that after both its rigs, Noble Discoverer and Kulluk, suffered heavy damage last year and were cited for EPA violations, it would not drill in Alaska's Arctic waters in 2013. Shell's Arctic drilling operation is in limbo right now. "Six months after federal officials chastised Shell Oil for its faulty offshore drilling operations in the Arctic, the company has yet to explain what safeguards it has put in place or when it plans to resume exploring for oil in the vulnerable region," the Los Angeles Times reported on September 25. Shell has not yet applied to drill in Alaska's Arctic seas in 2014. This is a good time to reflect on drilling in the Arctic Ocean as it relates to sea ice. Drilling in Arctic seas will result in gas flaring,

which emits black carbon that absorbs solar radiation and will speed up melting of the Arctic sea ice. We need to connect a few dots about gas flaring. Professor Rob Nixon wrote in Slow Violence and the Environmentalism of the Poor: Children, moreover, who had no access to electricity to read or learn by also had no experience of night, as they lived 24/7 beneath the blazing false sun of interminable flares, as if in some seasonless equatorial rendition of an Arctic summer. In the mid-'90s, when flaring [from Shell and Chevron pipes] from Nigeria's oil fields was pumping 12 million tons of methane and 35 million tons of carbon dioxide into the atmosphere annually, it was argued by some that this was the single greatest contributor worldwide to climate change. Iñupiaq cultural activist Rosemary Ahtuangaruak wrote in her testimony in Arctic Voices: Resistance at the Tipping Point (that I edited) that in her community, Nuiqsut in Arctic Alaska, between 1986 and 1997 there was "a 600 percent increase in respiratory patients in a village of 400 people." As a community health aide, she was able to analyze the cause: What was contributing to this increase in respiratory illnesses? The most overwhelming issue was that oil development around Nuiqsut had increased, and had gotten closer. The worst nights on call were nights when many natural gas flares occurred. Those flares release particles that traveled to us. Increased concentrations of particulate matter from flares occur during inversions, a bowl-like trap, with cold air trapped by warm air. And skies are now ablaze over the Bakken oil fields in North Dakota. Citing a report published by Ceres, Lauren McCauley wrote on Common Dreams in July: "Bright torches of natural gas are to become an ever-more common sight along the horizon of North Dakota as the environmentally devastating practice of flaring, or burning off natural gas as a byproduct of oil production, continues to skyrocket." Moreover, the Ceres report states, "a variety of other hazardous pollutants are generated by the process, including black carbon, another potent driver of climate change with adverse health effects." The report also explains why the natural gas is flared off: "At current market rates, oil is approximately 30 times more valuable than natural gas. As a result, producers have chosen to flare much of the gas they produce, rather than invest in the infrastructure necessary to collect, process and market it." With all that, you can see, when Shell finally resumes drilling operation in the Arctic Ocean (let's make sure that never happens), there will be flaring, lot of flaring. If it doesn't make sense to invest "in the infrastructure necessary to collect, process and market" the natural gas in the benign environment of the Bakken oil fields, it will never make sense to invest in such infrastructure in the harsh environment in the middle of the Arctic Ocean. Shell will get their oil and flare off the gas -- and contribute to rapid disintegration of the Arctic sea ice -- perhaps taking us toward the end-Permian extinction, a bit sooner than we have to. In a piece about the recent floods in Colorado I pointed out that not only do we need to connect dots across geographies, as I've done here with gas flaring, but we also need to carefully look at -- repeated assaults -- in a particular geography. As I wrote, in the last decade and a half Colorado (and its neighbor New Mexico) has gone through three major assaults -- massive tree deaths, massive wildfires, and now massive floods -- each in turn has been called "the worst natural disaster" the region has seen. Each in turn has also made the next one worse -- millions of dead trees made the wildfires worse, and we are now learning that the wildfires are making the floods worse. The human and nonhuman communities in the Arctic are suffering from repeated assaults -- climate change and pollution -- perhaps more than on any other region on earth. To understand this we need to take a long view of what sociologist Ramachandra Guha had called "struggles against environmental degradation" and "struggles for environmental renewal." As I was writing this piece, news arrived -- drones are now flying above the Chukchi Sea in Arctic Alaska. In a future piece I'll write about the militarization of the Arctic. Thursday morning I received an email from the Alaska Wilderness League: "So far, 500,000 of you have signed a petition asking President Obama to keep Big Oil from drilling in the Arctic Ocean. Today, 15 (costumed) polar bears and volunteers will deliver your 500,000 comments directly to the White House." Many more people -- from all across the political spectrum need to join this fight. The disintegration of the Arctic will lead to a devastated earth.

## Drilling causes warming- two thirds of fossil fuels need to say in the ground

**Center for American Progress et al. no date** (Center for American Progress, The Wilderness Society, and Alaska Wilderness League, "America's Arctic – The Dual Threat of Climate Change and Offshore Drilling," http://www.alaskawild.org/wp-content/uploads/Arctic_Climate_Drilling_021613_FINAL_public.pdf)//RTF

In his State of the Union address, President Obama reiterated his commitment to acting on climate change for the sake of future generations. America's Arctic is ground zero for the devastating impacts of climate change – warming at about twice the rate of the rest of the world – and offshore drilling can only exacerbate the problem. CLIMATE CHANGE · Rapidly melting sea ice: The National Oceanic and Atmospheric Administration's 2012 Arctic Report Card documented dramatic changes, including record lows for sea ice and snow extent. · Thawing permafrost: Melting tundra is accelerating warming by releasing additional carbon as it thaws, potentially adding 0.4°F – 1.5°F to total global warming by 2100. · Increased warming from black carbon: Black carbon (a major component of soot), significantly increases climate change by darkening ice surface, causing it to absorb more heat and accelerate warming. OFFSHORE DRILLING · In order to stay within the upper limit of warming allowable for maintaining climate stability, the International Energy Agency warned that two-thirds of the world's proven fossil fuel reserves need to remain in the ground, untouched. · Exploiting reserves in the Arctic Ocean has the potential to release an additional 15.8 billion tons of CO2 into the atmosphere when burnedi – equivalent to the emissions from all passenger cars and light trucks in the US over a 13 year time periodii and raising global CO2 concentrations by 7.44 parts per million (ppm).iii 7.44 ppm equals 10% of the total rise in the global CO2 concentration over the past 50 years.iv · Despite industry claims that Arctic offshore drilling can be managed safely, Shell Oil's attempts to drill exploratory wells in 2012 resulted in a litany of mishaps, including: twice losing control of drill rigs, violating clean air protections, and dramatically failing a safety test of its oil spill response equipment. Bottom line: Shell's long list of setbacks and failures – coupled with the extreme risk for oil spills and further climate destruction in an already fragile ecosystem – provides overwhelming evidence that the oil and gas industry is not prepared to operate safely in the Arctic Ocean. President Obama should prioritize protecting the Arctic as part of his climate legacy and not approve any further offshore drilling in the region.

## Drilling causes warming- mass methane release- star this card, it indicts their studies

**Banerjee 4/14** (Neela, 4/14/14, LA Times Correspondent, "EPA drastically underestimates methane released at drilling sites," http://articles.latimes.com/2014/apr/14/science/la-sci-sn-methane-emissions-natural-gas-fracking-20140414)//RTF

A well pad in southwestern Pennsylvania. A new study finds that methane levels above shale gas wells during the drilling stage are up to 1,000 times higher than EPA estimates. A well pad in southwestern Pennsylvania. A new study finds that methane... (Photo courtesy of Dana Caulton ) Drilling operations at several natural gas wells in southwestern Pennsylvania released methane into the atmosphere at rates that were 100 to 1,000 times greater than federal regulators had estimated, new research shows. Using a plane that was specially equipped to measure greenhouse gas emissions in the air, scientists found that drilling activities at seven well pads in the booming Marcellus shale formation emitted 34 grams of methane per second, on average. The Environmental Protection Agency has estimated that such drilling releases between 0.04 grams and 0.30 grams of methane per second. The study, published Monday in the Proceedings of the National Academy of Sciences, adds to a growing body of research that suggests the EPA is gravely underestimating methane emissions from oil and gas operations. The agency is expected to issue its own analysis of methane emissions from the oil and gas sector as early as Tuesday, which will give outside experts a chance to assess how well regulators understand the problem. Carbon dioxide released by the combustion of fossil fuels is the biggest contributor to climate change, but methane — the chief component of natural gas — is about 20 to 30 times more potent when it comes to trapping heat in the atmosphere. Methane emissions make up 9% of the country's greenhouse gas emissions and are on track to increase, according to the White House. The Pennsylvania study was launched in an effort to understand whether the measurements of airborne methane matched up with emissions estimates based on readings taken at ground level, the approach the EPA and state regulators have historically used. Researchers flew their plane about a kilometer above a 2,800 square kilometer area in southwestern Pennsylvania that included several active natural gas wells. Over a two-day period in June 2012, they detected 2 grams to 14 grams of methane per second per square kilometer over the entire area. The EPA's estimate for the area is 2.3 grams to 4.6 grams of methane per second per square kilometer. Since their upper-end measurements were so much higher than the EPA's estimates, the researchers attempted to follow the methane plumes back to their sources, said Paul Shepson, an atmospheric chemist at Purdue University who helped lead the study. In some cases, they were able to quantify emissions from individual wells. The researchers determined that the wells leaking the most methane were in the drilling phase, a period that has not been known for high emissions. Experts had thought that methane was more likely to be released during subsequent phases of production, including hydraulic fracturing, well completion or transport through pipelines. The airborne readings were a snapshot over two days, Shepson cautioned, and further research over a longer period and at other sites are needed to know whether the Pennsylvania measurements are typical. Much of the natural gas drilling in southwestern Pennsylvania goes through coal beds, which contain methane that might be leaking out, according to the study. The researchers speculated that underbalanced drilling methods — in which the pressure in the well-bore is lower than the surrounding geology — allows fluids and gases to enter the well-bore and travel to the surface. Energy producers use underbalanced drilling because it allows them to capture valuable supplies of ethane and butane, Shepson said. The disparity between the researchers' measurements and the EPA's data illustrates the limits of the methods used by regulators, Shepson said. The EPA's approach puts regulators at the mercy of energy companies, which control access to the wells, pipelines, processing plants and compressor stations where methane measurements should be made. "It's tough," Shepson said. Last year, researchers from Stanford, Harvard and elsewhere reported in PNAS that methane emissions in the continental U.S. might be 50% greater than the EPA's official estimates. Another study by Stanford researchers, published in February in the journal Science, also concluded that the EPA underestimates methane leakage from the natural gas industry and other sources. [Updated 10 a.m. PDT, April 15: The EPA said it was aware that non-government scientists had come to "different conclusions about the level of methane emissions from the oil and gas sector." Some of those estimates are higher than the EPA's and some are lower, the agency said in a statement. A slew of new data about methane and drilling is expected over the next few years, and EPA officials will be reviewing all of it and updating its emissions estimates as necessary, according to the statement.] The new study comes two weeks after the White House ordered the EPA to identify ways to cut methane from oil and gas production. If the agency decides to issue new rules, they must be in place by the end of 2016. In February, Colorado became the first state to regulate methane emissions from the oil and gas sector, requiring the industry to detect and fix leaks and install equipment to capture 95% of methane emissions. Last week, Ohio adopted rules to get companies to reduce methane leakage from above-ground equipment used in natural gas development, like valves and pipelines. Those rules do not appear to address leaks during drilling.

## Arctic drilling causes warming and spills can't be cleaned up- status quo also solves energy security

**Beinecke 12/05** (Francis, 12/05/13, President of the Natural Resources Defense Council "In a Warming Arctic, Oil Drilling Brings Disaster (Op-Ed)," http://www.livescience.com/41744-arctic-drilling-brings-disaster.html)//RTF

Shell Oil recently announced plans to resume drilling operations in the Arctic Ocean this summer. The company suffered a string of failures when it tried to drill there last year — from having its emergency equipment "crushed like a beer can" in tests to grounding its drill rig in a winter storm. But these fiascoes haven't stopped Shell. The company is determined to gamble with pristine ocean waters once again. Yet even as the oil giant draws up drilling plans, the Arctic continues to feel the brunt of climate change. Last year, the extent of sea ice in the Arctic was the smallest on record — just half the average coverage of recent decades. This year was slightly better, but scientists say the trend of shrinking ice will amplify global warming by darkening the planet's surface and allowing more heat to be absorbed — ultimately contributing to changing weather patterns that already threaten communities in the United States and around the world, from New York to the Philippines. America doesn't need to trash the Arctic Ocean. We don't need to make climate change worse with more dirty fuels. We have safer, cleaner ways to power our economy. And we have the wisdom to recognize that some places are too special to drill. Grounded Shell barge on Kodiak IslandPin It The Royal dutch Shell drill barge Kulluk grounded along Kodiak Island. Credit: Coast Guard Petty Officer

1st.Class Travis MarshView full size image The United States is already embracing innovations that strengthen energy security and preserve our natural heritage at the same time. Last year, our nation raised fuel-efficiency standards for new cars to 54.5 miles per gallon — on average — by 2025. That's about double the mileage our cars get today. These standards will save consumers $1.7 trillion at the gas pump and reduce our oil imports by one-third — they will also cut in half the amount of global-warming pollution coming from new cars. Similar gains in efficiency have helped slash our fossil fuel use across the economy. In fact, efficiency has done more to meet America's growing energy needs in the last 40 years than oil, gas and nuclear combined. NRDC President looks at whale bonesPin It NRDC president Frances Beinecke looking at remains of a traditional home made from whale bones, near the Chuckchi Sea. Credit: Niel Lawrence, NRDC.View full size image Efficiency is our fastest growing energy resource, and together with our enormous stores of wind, solar and other renewable power, it represents the energy future. The United States has the ability to rely 100 percent on clean energy, and NRDC is committed to reaching that goal as soon as possible. This is the path forward for our nation. But if we continue to sacrifice our communities and wild places by drilling for fuels that cause climate change, we will find ourselves in a dead end. Pin It If you're a topical expert — researcher, business leader, author or innovator — and would like to contribute an op-ed piece, email us here. View full size image This summer I stood on the coast of the Chukchi Sea, where Shell plans to drill, and marveled at its wild shoreline, sculpted ice, and enormous northern sky. I knew that underneath the surface, the sea was teeming with life. Shellfish thrive along the long shallow floor, creating a smorgasbord for walrus, seals, and gray whales. Roughly half of America's polar bears live off the Chukchi. [Arctic Drilling Risks Threaten Inupiat Traditions (Op-Ed)] As I looked out to sea, I tried to imagine what would happen in the event of an oil spill. When I served on the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, I saw how the industry struggled to respond to a spill in the Gulf of Mexico. A spill in the Arctic would prove far more challenging. Oil would be trapped under ice for months, and the nearest back-up supply of response gear is 2,000 miles away.No oil company is a match for those remote and rugged conditions. The Arctic is the last wild ocean the planet has left, and it is already suffering more from climate change than any other region on the planet. We should safeguard it, not compromise it further with drill rigs and carbon pollution. NRDC is fighting to block Shell from drilling so we can keep these Arctic waters wild and pristine, and we are calling on the administration of President Barack Obama to scrap plans to offer more oil and gas leases in the Chukchi Sea. NRDC President visits the Chuckchi Sea, Shell drill sitePin It NRDC president Frances Beinecke along the coast of the Chuckchi Sea, where Shell Oil wants to drill. Credit: Niel Lawrence, NRDC.View full size image And at the same time, NRDC continues to expand the energy solutions that already clean up our air, put Americans to work and reduce the threat of climate change. You can join the effort by going to NRDC's new site DemandCleanPower.org. Together, we can build a clean energy future.

# AT: BRIDGE FUEL

**Natural gas wont be a bridge fuel – creates more warming than it solves**
Robert W. **Howarth** (David R. Atkinson Professor of Ecology & Environmental Biology at Cornell) Tony **Ingraffea** (the Dwight C. Baum Professor of Engineering at Cornell) **and** Renee **Santoro** (a research technician in ecology and evolutionary biology at Cornell) April **2011**
"Methane and the greenhouse-gas footprint of natural gas from shale formations"
http://www.sustainablefuture.cornell.edu/news/attachments/Howarth-EtAl-2011.pdf
Although natural gas is promoted as a bridge fuel over the coming few decades, in part because of its presumed benefit for global warming compared to other fossil fuels, very little is known about the GHG footprint of unconventional gas. Here, we define the GHG footprint as the total GHG emissions from developing and using the gas, expressed as equivalents of carbon dioxide, per unit of energy obtained during combustion. The GHG footprint of shale gas has received little study or scrutiny, although many have voiced concern. The National Research Council (2009) noted emissions from shale-gas extraction may be greater than from conventional gas. The Council of Scientific Society Presidents (2010) wrote to President Obama, warning that some potential energy bridges such as shale gas have received insufficient analysis and may aggravate rather than mitigate global warming.And in late 2010, the U.S. Environmental Protection Agency issued a report concluding that fugitive emissions of methane from unconventional gas may be far greater than for conventional gas (EPA 2010). Fugitive emissions of methane are of particular concern. Methane is the major component of natural gas and a powerful greenhouse gas. As such, small leakages are important. Recent modeling indicates methane has an even greater global warming potential than previously believed, when the indirect effects of methane on atmospheric aerosols are considered (Shindell et al. 2009). The global methane budget is poorly constrained, with multiple sources and sinks all having large uncertainties. The radiocarbon content of atmospheric methane suggests fossil fuels may be a far larger source of atmospheric methane than generally thought (Lassey et al. 2007). The GHG footprint of shale gas consists of the direct emissions of $CO_2$ from enduse consumption, indirect emissions of $CO_2$ from fossil fuels used to extract, develop, and transport the gas, and methane fugitive emissions and venting. Despite the high level of industrial activity involved in developing shale gas, the indirect emissions of $CO_2$ are relatively small compared to those from the direct combustion of the fuel: 1 to 1.5 g C MJ□1 (Santoro et al. 2011) vs 15 g C MJ□1 for direct emissions (Hayhoe et al. 2002). Indirect emissions from shale gas are estimated to be only 0.04 to 0.45 g C MJ□1 greater than those for conventional gas (Wood et al. 2011). Thus, for both conventional and shale gas, the GHG footprint is dominated by the direct $CO_2$ emissions and fugitive methane emissions. Here we present estimates for methane emissions as contributors to the GHG footprint of shale gas compared to conventional gas.

**Natural gas production drives warming – methane emissions are key**
Robert W. **Howarth** (David R. Atkinson Professor of Ecology & Environmental Biology at Cornell) Tony **Ingraffea** (the Dwight C. Baum Professor of Engineering at Cornell) **and** Renee **Santoro** (a research technician in ecology and evolutionary biology at Cornell) April **2011**
"Methane and the greenhouse-gas footprint of natural gas from shale formations"
http://www.sustainablefuture.cornell.edu/news/attachments/Howarth-EtAl-2011.pdf
We evaluate the greenhouse gas footprint of natural gas obtained by highvolume hydraulic fracturing from shale formations, focusing on methane emissions. Natural gas is composed largely of methane, and 3.6% to 7.9% of the methane from shale-gas production escapes to the atmosphere in venting and leaks over the lifetime of a well. These methane emissions are at least 30% more than and perhaps more than twice as great as those from conventional gas. The higher emissions from shale gas occur at the time wells are hydraulically fractured—as methane escapes from flow-back return fluids—and during drill out following the fracturing. Methane is a powerful greenhouse gas, with a global warming potential that is far greater than that of carbon dioxide, particularly over the time horizon of the first few decades following emission. Methane contributes substantially to the greenhouse gas footprint of shale gas on shorter time scales, dominating it on a 20-year time horizon. The footprint for shale gas is greater than that for conventional gas or oil when viewed on any time horizon, but particularly so over 20 years. Compared to coal, the footprint of shale gas is at least 20% greater and perhaps more than twice as great on the 20-year horizon and is comparable when compared over 100 years.

## Natural gas transition crushes renewables – dooms green tech

**Friedman, 8/4** won the 2002 Pulitzer Prize for commentary, his third Pulitzer for The New York Times. He became the paper's foreign-affairs Op-Ed columnist in 1995. Previously, he served as chief economic correspondent in the Washington bureau and before that he was the chief White House correspondent. In 2005, Mr. Friedman was elected as a member of the Pulitzer Prize Board (Thomas L. Friedman, NYT, 4 August 2012, "Get It Right on Gas," http://www.nytimes.com/2012/08/05/opinion/sunday/friedman-get-it-right-on-gas.html?_r=1)//CC

That is the question — because natural gas is still a fossil fuel. The good news: It emits only half as much greenhouse gas as coal when combusted and, therefore, contributes only half as much to global warming. The better news: The recent glut has made it inexpensive to deploy. But there is a hidden, long-term, cost: A sustained gas glut could undermine new investments in wind, solar, nuclear and energy efficiency systems — which have zero emissions — and thus keep us addicted to fossil fuels for decades. That would be reckless. This year's global extremes of droughts and floods are totally consistent with models of disruptive, nonlinear climate change. After record warm temperatures in the first half of this year, it was no surprise to find last week that the Department of Agriculture has now designated more than half of all U.S. counties — 1,584 in 32 states — as primary disaster areas where crops and grazing areas have been ravaged by drought. That is why on May 29 the British newspaper The Guardian quoted Fatih Birol, the chief economist for the International Energy Agency, as saying that "a golden age for gas is not necessarily a golden age for the climate" — if natural gas ends up sinking renewables. Maria van der Hoeven, executive director of the I.E.A., urged governments to keep in place subsidies and regulations to encourage investments in wind, solar and other renewables "for years to come" so they remain competitive

Natural Gas is not a bridge to renewables

**Roberts 1-7-2013** – Staff writer for Grist (David, "Natural gas: It's a hedge, not a bridge," Grist, http://grist.org/climate-energy/natural-gas-its-a-hedge-not-a-bridge/)

The paper's got some intriguing things to say about methane emissions from natural gas production, which is a hot topic right now. (Long story short, the paper claims that methane emissions don't have much bearing on long-term climate outcomes.) But I hope that doesn't distract from the more central conclusion, which is that true climate safety leaves very, very little room for a natural gas bridge. Here's how the abstract puts it: In the context of the most ambitious stabilization objectives (450 ppm $CO_2$), and absent carbon capture and sequestration, a natural gas bridge is of limited direct emissions-reducing value, since that bridge must be short. Natural gas can, however, play a more important role in the context of more modest but still stringent objectives (550 ppm $CO_2$), which are compatible with longer natural gas bridges. [my emphasis] It's important to note that 450 ppm is not the most ambitious stabilization objective. Climate scientist James Hansen and others have argued that anything over 350 ppm is an unacceptable risk. (Hitting 350 would mean reducing current atmospheric $CO_2$ levels — we recently hit 394.) I asked Levi about this and he said that there just aren't many 350 ppm scenarios to work with in the climate modeling world. Nonetheless, I think it stands to reason that if the natural gas bridge in a 450 ppm scenario is "short," the bridge in a 350 ppm scenario is … not there at all. There are detailed proposals out there for getting to 350 ppm, but they involve a heroic, wholesale shift directly to carbon-free energy. They do not include a ramping up of natural gas, temporary or otherwise. The conclusion is inescapable: There is no natural gas bridge to true climate safety. What natural gas is, then, is not a bridge but a hedge. Levi says as much: Collectively, these results suggest that it may be useful to think of a natural gas bridge as a potential hedging tool against the possibility that it will be more difficult to move away from coal than policymakers desire or can achieve, rather than merely (or primarily) as a way to achieve particular desired temperature outcomes. [my emphasis] Now, this doesn't necessarily mean that natural gas should be opposed by climate hawks. It may be that a temporary push for natural gas, while it doesn't have much direct emissions-reductions benefit, has political or economic benefits. As Levi emphasizes, his paper says nothing about those aspects of natural gas; it's purely a physical modeling of the supposed bridge. There's an argument to be made that a temporary shift to natural gas would positively affect the political prospects for clean energy; there's an argument to be made that it would offer an economic boost; there's an argument to be made that it would reduce non-$CO_2$ pollutants like soot and mercury. And as Levi notes, there's an argument to be made that a natural gas bridge could be a kind of backup strategy, an insurance policy just in case politicians don't get a clue and tackle climate change seriously. But there is no credible argument that a temporary switch to natural gas is a direct means to reach a safe level of carbon in the atmosphere. It is not. It's a hedge-the-bets strategy, a way to soften the coming blows. If we're serious about the welfare of future generations, we won't keep casting about for bridges. We'll screw up our courage and make the leap.

Natural Gas is a bridge to nowhere

**Howarth 5-15-14** -- Professor from Cornell University's Agriculture, Energy & Environmental department (Robert W., "A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas," Wiley Online Library, http://onlinelibrary.wiley.com/doi/10.1002/ese3.35/full)

Is natural gas a bridge fuel? At best, using natural gas rather than coal to generate electricity might result in a very modest reduction in total greenhouse gas emissions, if those emissions can be kept below a range of 2.4–3.2% (based on [40], adjusted for the latest information on radiative forcing of methane [34]). That is a big "if," and one that will require unprecedented investment in natural gas infrastructure and regulatory oversight. For any other foreseeable use of natural gas (heating, transportation), the GHG is larger than if society chooses other fossil fuels, even with the most stringent possible control on methane emissions, if we view the consequences through the decadal GWP frame. Given the sensitivity of the global climate system to methane [41, 42], why take any risk with continuing to use natural gas at all? The current role of methane in global warming is large, contributing 1.0 watts m□2 out of the net total 2.29 watts m□2 of radiative forcing [34]. Am I recommending that we continue to use coal and oil, rather than replace these with natural gas? Not at all. Society needs to wean itself from the addiction to fossil fuels as quickly as possible. But to replace some fossil fuels (coal, oil) with another (natural gas) will not suffice as an approach to take on global warming. Rather, we should embrace the technologies of the 21st Century, and convert our energy systems to ones that rely on wind, solar, and water power [59-61]. In Jacobson et al. [54], we lay out a plan for doing this for the entire state of New York, making the state largely free of fossil fuels by 2030 and completely free by 2050. The plan relies only on technologies that are commercially available at present, and includes modern technologies such as high-efficiency heat pumps for domestic water and space heating. We estimated the cost of the plan over the time frame of implementation as less than the present cost to the residents of New York from death and disease from fossil fuel caused air pollution [54]. Only through such technological conversions can society truly address global change. Natural gas is a bridge to nowhere.

# AT: METHANE HYDRATE EXTRACTION

Methane Hydrate extraction fails
**Hobson 3-19-13** -- Alaska oil and gas reporter for EnergyWire (Margaret Kriz, "U.S. reports huge potential for 'fire in the ice' as Japan hurries to production," Energy Wire, http://www.eenews.net/stories/1059978042)BC

But tapping into the frozen hydrate resources is tricky. Methane hydrates are an ice-bound form of natural gas that is found under Arctic permafrost and in deepwater coastal regions. The hydrates consist of tiny cages of frozen water molecules that encase a methane molecule. A slushy sherbet-like mixture of methane hydrates forms spontaneously when water and methane mix in cold temperatures or under high-pressure conditions deep under the ocean floor. That has produced major headaches for energy companies drilling in the cold, deepwater regions of the Gulf of Mexico. If moisture seeped into a cold pipeline, the natural gas and water would quickly convert into icy hydrate chunks, clogging the system and blocking the flow of fuel. Gas has never been commercially produced from methane hydrates. But Japan's technical advances and a successful 2012 test on Alaska's North Slope provide proof that natural gas can be safely extracted from hydrate formations, according to Ray Boswell, technical manager on methane hydrates at the Energy Department's National Energy Technology Laboratory. "The technology definitely exists, there's no doubt about it," Boswell said. "There are no black boxes that have to be solved be able to do it." "What needs to be understood," he added, "is can it be done in a way that is viable economically? Can we produce it at the rates that will make it a feasible venture?"

Methane Hydrates are inaccessible and will perpetuate global warming if attempts at extraction are made
**Anderson 4-16-14** – Business Reporter, BBC News (Richard, "Methane hydrate: Dirty fuel or energy saviour?" BBC, http://www.bbc.com/news/business-27021610)

Huge reserves Otherwise known as fire ice, methane hydrate presents as ice crystals with natural methane gas locked inside. They are formed through a combination of low temperatures and high pressure, and are found primarily on the edge of continental shelves where the seabed drops sharply away into the deep ocean floor, as the US Geological Survey map shows. And the deposits of these compounds are enormous. "Estimates suggest that there is about the same amount of carbon in methane hydrates as there is in every other organic carbon store on the planet," says Chris Rochelle of the British Geological Survey. In other words, there is more energy in methane hydrates than in all the world's oil, coal and gas put together. By lowering the pressure or raising the temperature, the hydrate simply breaks down into water and methane - a lot of methane. One cubic metre of the compound releases about 160 cubic metres of gas, making it a highly energy-intensive fuel. This, together with abundant reserves and the relatively simple process of releasing the methane, means a number of governments are getting increasingly excited about this massive potential source of energy. Technical challenges The problem, however, is accessing the hydrates. Quite apart from reaching them at the bottom of deep ocean shelves, not to mention operating at low temperatures and extremely high pressure, there is the potentially serious issue of destabilising the seabed, which can lead to submarine landslides. A greater potential threat is methane escape. Extracting the gas from a localised area of hydrates does not present too many difficulties, but preventing the breakdown of hydrates and subsequent release of methane in surrounding structures is more difficult. And escaping methane has serious consequences for global warming - recent studies suggest the gas is 30 times more damaging than $CO_2$. These technical challenges are the reason why, as yet, there is no commercial-scale production of methane hydrate anywhere in the world. But a number of countries are getting close.

# DISADVANTAGES

# CANADA DA

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**Canadian economy growing now but export demand is key**

**Murray 6/11**- correspondent for NetNewsLedger (James, "Canadian Economy Poised for Economic Growth", NetNewsLedger, http://www.netnewsledger.com/2014/06/11/canadian-economy-poised-for-positive-growth/)WK

The RBC is out with predictions for the Canadian economy. The latest Economic and Financial Market Outlook states that Canada is poised for growth with growing demand for raw materials. The Bank also states that Ontario's economy is also poised for positive economic gains for the rest of the year. **External demand for Canada's goods is central to the country's economic growth story** this year and next, according to the latest Economic and Financial Market Outlook issued today by RBC Economics. RBC is forecasting real GDP growth of 2.4 per cent in 2014 and 2.7 per cent in 2015. "Our outlook for Canada is predicated on the fact that U.S. economic growth will be broadly based and that slowing global import demand that started in early 2012 will reverse course," said Craig Wright, senior vice-president and chief economist, RBC. "With global demand improving, the weakening Canadian dollar will provide that extra lift needed to shift the export sector into more than a bit player in Canada's economic growth story." Demand for Canadian exports will strengthen the pace of hiring, RBC says, and move the labour market closer to full employment. Against this backdrop, an uptick in wages will result in incomes rising faster than household mortgage and credit growth, according to Wright, which should cap the upside in the debt-to-income ratio. The cost of servicing debt remains historically low at this point, staving off increases in delinquencies and bankruptcies by consumers. A strengthening in demand from abroad will also underpin business confidence in 2014 and 2015, says RBC. This was substantiated in the latest Bank of Canada business outlook survey, which showed a growing number of firms experienced faster sales growth over last year with the majority expecting to see sales increase further in the year ahead. Despite poor weather conditions restraining Ontario's economy in the early months of this year, the province is still on track for accelerated growth in 2014, according to the latest RBC Economics Provincial Outlook released today. The slow start to 2014 prompted RBC to revise its real GDP forecast slightly lower to 2.3 per cent from the 2.5 per cent previously forecasted. However, RBC says the revised rate is still a notable improvement from the 1.3 per cent growth in 2013. "Ontario's economic growth appears to be fairly broad-based so far this year with the housing sector being one of only a few sectors showing a decline," said Craig Wright, senior vice-president and chief economist, RBC. "We expect the province to benefit disproportionately from a strengthening U.S. economy and more competitive Canadian dollar on a go-forward basis." RBC anticipates the lift from abroad will be even greater in 2015 with a fully revitalized U.S. economy contributing to a faster pace in Ontario's real GDP growth at 2.8 per cent. Manufacturing activity still managed to advance despite this winter's difficult weather, which disrupted the flow of goods transported across and outside the province – manufacturing sales grew by 3.3 per cent in Q1 2014 compared to the same period last year. Weather-related issues also did not appear to hold back Ontario's exports as the value of merchandise sold abroad rose for the fourth straight quarter on a year-over-year basis. "A sustained momentum in exports despite poor weather conditions bodes well for stronger gains throughout the rest of this year," added Wright. "We expect the improving trade trend to provide a compelling basis for Ontario businesses to ramp up capital investments."

**Natural gas key to Canada's economy-US production trades off**

Antunes et al. 12- Director, National and Provincial Forecast at the Conference Board of Canada, the foremost, non-partisan, objective, applied research organization in Canada (Pedro,

"The Role of Natural Gas in Powering Canada's Economy", The Conference Board of Canada, www.integritybc.ca/wp…/13-181_NaturalGasinCanada.pdf )//WK
Natural gas plays an important role in Canada's economy, particularly in its energy economy. Canada ranks 18th in the world in proved reserves of natural gas, third in production (the U.S. ranks first, followed by Russia), and fourth in exports. The natural gas industry has a history that spans more than six decades of supplying a clean-burning fuel to meet growing market requirements in both Canada and the United States. In 2010, Canada produced 5.7 tcf of raw natural gas (5.4 tcf of marketable natural gas), representing 37.7 per cent of the country's primary energy supply (energy in its raw form), and satisfying 30.6 per cent of the country's final demand for energy. 2 Natural gas represented 42 per cent of primary energy exports by energy content and 16.6 per cent by value. Natural gas accounted for 3.9 per cent of total merchandise trade in 2010. Sixtyone per cent of natural gas production was exported. Natural gas has made a strong contribution to Canada's energy economy. It is readily available from British Columbia to Quebec, and is slowly growing in availability in Atlantic Canada. Retail price indexes indicate that natural gas has also experienced less price inflation since 1990 than either electricity or liquid fuels. In its raw form, natural gas may include impurities such as nitrogen, carbon dioxide, or sulphur compounds in addition to methane, ethane, propane, and butane. Raw natural gas is processed at the point of production to remove some water and separate any crude oil or condensate. The raw gas is then transported by pipeline to a processing plant where much of the remaining water, carbon dioxide, sulphur, propane, and butane is removed to meet transport specifications set by the pipeline company that will transport the natural gas to market. Odorant will be added before delivery to the customer. The natural gas that is delivered for consumption is a clean-burning product whose greenhouse gas and other emissions are small compared with other hydrocarbons. The natural gas industry has been a strong performer in Canada's energy economy. Production, exports, deliveries, and supporting infrastructure have demonstrated a strong track record of dependability and growth. The future holds both challenges and opportunities as the industry and its customers continue to evolve. In recent years, horizontal drilling and formation fracturing technologies have been improved and costs have been reduced to the extent that shale gas formations have become economic to produce. Primarily because of this increased unconventional gas production, natural gas production in the U.S. has outstripped market growth. The regional distribution of natural gas production in the U.S. has also changed significantly. The level and regional distribution of demand for Canadian natural gas in U.S. markets is changing. The changing U.S. market balance has resulted in lower natural gas prices for consumers and producers in both countries. This is occurring at a time when conventional natural gas resources in Western Canada have been maturing. One of the challenges the industry must face is maintaining production levels in an environment of lower prices and reduced export demand from the United States. We project marketable (as opposed to raw) Canadian natural gas production will decline from its current level of 5.3 tcf/year to just 4.8 tcf/year by 2019 as low prices continue to constrain drilling activity, then recover steadily to 5.5 tcf/year by 2030. Another challenge is adjusting transportation infrastructure to accommodate the changing geographic distribution of natural gas supplies.

**Canada economic growth key to prevent arctic war**
Dobranksy 12- Steve, Adjunct Professor at Lakeland College. He is completing his Ph.D. at Kent State University and is ABD. He has an M.A. from Ohio University and a B.A. from Cleveland State University (Steve, "Military Security, Energy Resources, and the Emergence of the Northwest Passage: Canada's Arctic Dilemma", American Diplomacy, http://www.unc.edu/depts/diplomat/item/2012/0106/ca/dobransky_arctic.html)//WK
Canada's apparent inability in winning over the international community on its Arctic argument has been a growing concern for a significant number of Canadians, especially some conservative

politicians and nationalistic citizens and scholars. A good number of books and articles have been written on the Arctic. A large number have come in the last 15-20 years, corresponding to the recognition that the Arctic ice was going to start melting and, thereby, open up increased international activities in the region. Stephen Harper and his Conservative Party came into power in 2006 with Canadian sovereignty over the Arctic as a major political issue. After proclaiming its desire to increase Canada's Arctic forces and ships, the Harper government ordered only 6-8 icebreakers, which later turned out to be the wrong type of ships and the orders have yet to be completed. Canada is carrying out better and stronger actions on its Arctic policy, but its economic and force limitations are being exposed and creating a difficult political dilemma for the future. If Canada is to achieve its territorial and diplomatic ambitions, then it likely requires a much greater civilian and military presence in the Arctic all year-round. Yet, there is no indication that Canadians are willing to sacrifice their current social system of extensive benefits for a much larger military budget and Arctic force. And, there is no evidence that Canadians want to pay much more in taxes or commit to a military draft. Canada has only around 70,000 active-duty military personnel, 30,000 reserve forces, and a $20 billion/year military budget. Its Arctic-ready forces and equipment are just a handful, a few thousand personnel at best who are truly specialists, mainly the Canadian Rangers. Moreover, there is no indication that Canada's economy will greatly expand in the foreseeable future to produce the necessary surplus wealth to pay for a sizeable increase in an Arctic force. Canada's economic growth has not been great over the last decade, let alone ever. Thus, Canada presents a very vocal case for the Arctic but has been unable to completely back up its claims with the necessary increases in personnel, materials, ships, and money, which is very telling for the future. If not by now, then when? If Canada is unwilling to shift or produce enough resources to create a sufficient Arctic force that is capable of fully securing the region over the three thousand miles of waterways, plus above and beneath the surface, then it opens up the possibility that other forces outside the region may move in and claim the trillions of dollars in natural resources. Russia is an obvious pursuer. The U.S. is another option. China, with its massively growing need for oil—especially when it runs out of much of its own domestic sources in approximately 10 years—will be looking everywhere for oil opportunities. Any country that can move oil rigs and mining companies into the Arctic area, operate them and maintain them, and have enough forces to possibly defend them will have trillions of reasons to act pro-actively. Hypothetical but quite possible. Can or will Canada defend this entire region on its own? Can or will Canadians risk an all-out war with Russia, China, or some other major power for control over all of the Arctic resources? Is Canada even capable of going into the ring against any of the major powers, especially if and when there is a great need and crisis in energy resources? Canada can make many public proclamations and scholarly materials on its claims to the Arctic, but its inability or unwillingness to move aggressively to secure the emerging Arctic region is a signal to all that this could become an open-season area in the near future. The Arctic is increasingly looking like the grounds for a potential rivalry similar to the Western World's colonization, an Oklahoma land rush, a California gold rush, and of course an Alaskan and Klondike gold rush. Maybe all rolled up into one. There are so many valuable resources in this Arctic area that one can only imagine how aggressively countries will act in the coming years and decades as natural resources become increasingly scarce and they become increasingly desperate for more resources and revenues. The massive amount of resources in the Arctic are there for the taking unless Canada is willing to make significant sacrifices to secure the area. Much greater taxation, a major reduction in social welfare benefits, lower wages, longer work hours, much greater economic production, and a significantly larger military that may require a draft, are all one and together necessary options if Canada is to establish fully a sizeable force to secure the entire Arctic region on its side year-round. Canadians spent years debating whether or not to spend the money for 6-8 ships for the Arctic, which is miniscule but indicative of Canadian priorities and intentions. Much greater resources and sacrifices have to be made. Ironically, Canadians may

have to give up being Canadian and become more like Americans in order to make and implement the necessary policy changes and play successfully the game of power politics. So far, most Canadians do not appear willing to give up most of what it is to be Canadian. But, will this change in the future?

**That goes nuclear**

Wallace and Staples 10- *Professor Emeritus at the University of British Columbia, **Canadian policy analyst. He is president of Public Response, a digital agency that services non-profit organizations and trade unions in the fields of online engagement and government relations (Michael and Steven, "Ridding the Arctic of Nuclear Weapons: A Task Long Overdue", Rideau Institute, http://www.arcticsecurity.org/docs/arctic-nuclear-report-web.pdf)//WK

The fact is, the Arctic is becoming a zone of increased military competition. Russian President Medvedev has announced the creation of a special military force to defend Arctic claims. Last year Russian General Vladimir Shamanov declared that Russian troops would step up training for Arctic combat, and that Russia's submarine fleet would increase its "operational radius." 55 Recently, two Russian attack submarines were spotted off the U.S. east coast for the first time in 15 years. In January 2009, on the eve of Obama's inauguration, President Bush issued a National Security Presidential Directive on Arctic Regional Policy. It affirmed as a priority the preservation of U.S. military vessel and aircraft mobility and transit throughout the Arctic, including the Northwest Passage, and foresaw greater capabilities to protect U.S. borders in the Arctic. The Bush administration's disastrous eight years in office, particularly its decision to withdraw from the ABM treaty and deploy missile defence interceptors and a radar station in Eastern Europe, have greatly contributed to the instability we are seeing today, even though the Obama administration has scaled back the planned deployments. The Arctic has figured in this renewed interest in Cold War weapons systems, particularly the upgrading of the Thule Ballistic Missile Early Warning System radar in Northern Greenland for ballistic missile defence. The Canadian government, as well, has put forward new military capabilities to protect Canadian sovereignty claims in the Arctic, including proposed ice-capable ships, a northern military training base and a deep-water port. Earlier this year Denmark released an all-party defence position paper that suggests the country should create a dedicated Arctic military contingent that draws on army, navy and air force assets with shipbased helicopters able to drop troops anywhere. Danish fighter planes would be tasked to patrol Greenlandic airspace. Last year Norway chose to buy 48 Lockheed Martin F-35 fighter jets, partly because of their suitability for Arctic patrols. In March, that country held a major Arctic military practice involving 7,000 soldiers from 13 countries in which a fictional country called Northland seized offshore oil rigs. The manoeuvres prompted a protest from Russia – which objected again in June after Sweden held its largest northern military exercise since the end of the Second World War. About 12,000 troops, 50 aircraft and several warships were involved. Jayantha Dhanapala, President of Pugwash and former UN under-secretary for disarmament affairs, summarized the situation bluntly: "From those in the international peace and security sector, deep concerns are being expressed over the fact that two nuclear weapon states – the United States and the Russian Federation, which together own 95 per cent of the nuclear weapons in the world – converge on the Arctic and have competing claims. These claims, together with those of other allied NATO countries – Canada, Denmark, Iceland, and Norway – could, if unresolved, lead to conflict escalating **into the threat or use of nuclear weapons**." Many will no doubt argue that this is excessively alarmist, but no circumstance in which nuclear powers find themselves in military confrontation can be taken lightly. The current geo-political threat level is nebulous and low – for now, according to Rob Huebert of the University of Calgary, "[the] issue is the uncertainty as Arctic states and non-Arctic states begin to recognize the geo-political/economic significance of the Arctic because of climate change."

# 2NC UNIQUENESS

**Canadian economy high now but sustained growth is key**
TCP 6/24- National Canadian news agency headquartered in Toronto (The Canadian Press, "Economists see more good than bad for Canada's economy as oil prices rise", The Chronicle Herald, http://thechronicleherald.ca/business/1218093-economists-see-more-good-than-bad-for-canada-s-economy-as-oil-prices-rise)/WK
Economists see more good than bad for Canada's economy as recent tensions in Iraq drive up global crude oil prices. Scotiabank commodity market specialist Patricia Mohr says the increase has a "two-pronged impact," but the benefits should outweigh the drawbacks. "Of course on the positive side, it really bolsters earnings for Western Canada's oil industry, but also the oil industry in Newfoundland and Labrador," she said. That, in turn, brings more tax and royalty revenues to government coffers. On the downside, crude is a big factor in gasoline prices. So the higher it goes, the more consumers are pinched. "But I would guess that the positive impact on earnings and also on our merchandise trade performance would offset the negative impact on consumers of higher gasoline prices," said Mohr. Todd Crawford, senior economist at the Conference Board of Canada, agrees the higher prices will be good for the bottom line of industry and government alike, but not necessarily on a sustained basis. The long-term outlook for oil is little changed, he said. "In general, when we have a higher risk of conflict in that region of the world, it tends to put an additional premium on oil prices," he said. "It's not really related to the underlying fundamentals of oil right now, which are still very strong, but wouldn't have supported the $4 and $5 per barrel jump that we've seen, say, in the last 30 days or so."

**Canadian economy rising-prefer predictive evidence**
Flavelle 6/17- economic correspondent for The Star (Dana, "Alberta to lead Canadian economy, report says", The Star, http://www.thestar.com/business/2014/06/17/alberta_to_lead_canadian_economy_report_says.html)//WK
Alberta will lead Canada's economic recovery this year while Ontario will perform in the middle of the pack, the Conference Board of Canada predicts in its spring provincial outlook for 2014. Overall, Canada's economic momentum is expected to pick up during the summer and fall and continue to improve in 2015, the board said in a report released Tuesday. However, a weak start to the year with severe winter weather and slower than expected U.S. demand for housing and autos means the Canadian economy will grow just 2.1 per cent this year. "Economic prospects have brightened for several provinces, as the expected strengthening in the U.S. economy will help boost real GDP growth on this side of the border over the next two years," Marie Christine Bernard, the board's associated director of provincial and territorial forecast, said. "Atlantic and Central Canada are expected to gather more momentum in 2015, and even stronger growth is expected in Western Canada." Alberta will lead the charge as investment in oilsands starts to level off and oil exports accelerate, the Ottawa-based think tank said. The province's economy is forecast to rise 3.5 per cent this year and a further 3.1 per cent next year. Ontario, with its large government deficit and sluggish business investment, will continue to face challenges and will grow just 1.8 per cent this year but rise to 2.7 per cent next year, the report said. Higher provincial spending on roads and other public projects should help boost growth, the report said, citing plans laid out in the province's May 1 budget. The Ontario government planned to spend $13 billion a year for the next 10 years, which should help create jobs and improve transportation networks, the report said. That budget didn't pass, but newly re-elected Premier Kathleen Wynne has promised to reintroduce it now that her government has a majority mandate. Ontario should also benefit from a strengthening U.S. economy, along with a lower

Canadian dollar relative to the U.S. currency, the board predicted. Across Canada, economic growth is expected to pick up in 2015, with real gross domestic product rising 2.6 per cent. The Bank of Canada is unlikely to raise its trend-setting interest rate until late next year, the board also said. The rate, which has been at 1 per cent since September 2010, is far below the 4.75 per cent level seen in 2007, before the Great Recession hit. The Canadian dollar will remain relatively stable at around 91 cents U.S., assuming ongoing tensions between Russia and Ukraine do not worsen, the board also predicted.

# 2NC LINKS

**Increased US production trades off with Canadian exports**
Duffy 12- financial writer for the Motley Fool (Aimee, "A Close-Up on Canada's Energy Challenges", The Motley Fool, http://www.fool.com/investing/general/2012/09/13/a-close-up-on-canadas-energy-challenges.aspx)//WK
Canada plays an important role in most politicians' plans for North American energy independence. The country is one of the world's richest when it comes to natural resources, and it is hard not to take that for granted sometimes. But, Canada has plenty of issues surrounding its energy development, some that are unique to its resources, and others that highlight the present and future challenges of many regions worldwide. Today, I'll take a look at what those challenges are, and what investors should be aware of going forward. Canada is the world's sixth-largest oil producer, churning out 3.7 million barrels of oil per day last year. At 175.2 billion barrels, Canada has the third-largest proven reserves in the world, behind only Venezuela and Saudi Arabia. All this is great news for the U.S., because nearly 30% of our foreign oil imports come from our neighbor to the north. Canada is just as glad to have us, mind you, as we buy 99% of the oil it exports. Canada has pretty significant natural gas reserves as well. According to the Energy Information Administration, it is the third-largest dry gas producer in the world. There are three main issues facing Canadian oil and gas production right now: the rapid growth of U.S. production, dependence on foreign capital, and public opposition to development. The seemingly overnight explosion of U.S. natural gas production has had a negative effect on some Canadian companies, but perhaps none has suffered as much as TransCanada (NYSE: TRP ) . The company's most important asset is its Mainline pipeline, which stretches 8,762 miles from Alberta east to Ontario. The Mainline represents a whopping 15% of TransCanada's assets, and right now it's sitting half empty. As U.S. gas supplies push into markets traditionally dominated by TransCanada, volumes on the Mainline are falling -- a death knell in the midstream business. Shipments have plummeted 70% over the last five years, and analysts expect that without some sort of drastic measure, the pipe will be running at one-third its capacity by 2014. The U.S. also buys a fair bit of Canadian natural gas, but those orders are expected to decline significantly in the coming years, forcing Canada to find and lock down other markets for its exports. TransCanada isn't the only pipeline company having trouble these days. Enbridge (NYSE: ENB ) , the company responsible for transporting about 70% of Canadian oil exports into the U.S., is facing extreme opposition to its Northern Gateway pipeline project. Right now, Kinder Morgan (NYSE: KMI ) is the only company with a pipeline that runs west from Alberta's oil sands to the coast of British Columbia. Enbridge's pipeline project has customer commitments, but is opposed by environmentalists, First Nation indigenous groups, and many Canadian politicians. Complicating things for the company is its recent public relations nightmare surrounding a 2010 major oil spill in Michigan.

**Canada relies on US imports**
Parfomak and Ratner 11- *Specialist in Energy and Infrastructure Policy, **Analyst in Energy Policy (Paul and Michael, "The US-Canada Energy Relationship: Joined at the Well", Congressional Research Service, http://www.fas.org/sgp/crs/row/R41875.pdf)//WK
The United States and Canada, while independent countries, effectively comprise a single integrated market for petroleum and natural gas. These markets are physically linked by billions of dollars of transportation and refining infrastructure, and are economically linked by direct

participation in the same regional and global energy markets. Canada is the largest foreign supplier of energy to the United States and will continue to be for the foreseeable future. The United States depends on Canada for oil and natural gas supplies that it cannot currently produce itself. As the primary supplier of U.S. imports of petroleum and natural gas, Canada is viewed as a stabilizing factor for U.S. energy supplies; although petroleum prices are set in a global market, the likelihood that Canada would cut off oil and natural gas supplies is remote. But **Canada is equally dependent upon the United States to buy energy exports** that might not easily find a market elsewhere due to geographical constraints. The United States is also a critical supplier to Canada of refined petroleum products. U.S.-based companies invest heavily in assets and energy resources in Canada and vice versa. Although individual companies in both countries may compete for specific energy opportunities (e.g., LNG terminals), the overall energy relationship between the United State and Canada is mutually beneficial.

# 2NC ARCTIC IMPACT

**Canada economy key to prevent arctic conflict**
Dobransky '12- professor at Cleveland State University, International relations PhD (Steve, June, "Military Security, Energy Resources, and the Emergence of the Northwest Passage: Canada's Arctic Dilemma," American Diplomacy, http://www.unc.edu/depts/diplomat/item/2012/0106/ca/dobransky_arctic.html)LC
If Canada is to achieve its territorial and diplomatic ambitions, then it likely requires a much greater civilian and military presence in the Arctic all year-round. Yet, there is no indication that Canadians are willing to sacrifice their current social system of extensive benefits for a much larger military budget and Arctic force. And, there is no evidence that Canadians want to pay much more in taxes or commit to a military draft. Canada has only around 70,000 active-duty military personnel, 30,000 reserve forces, and a $20 billion/year military budget. Its Arctic-ready forces and equipment are just a handful, a few thousand personnel at best who are truly specialists, mainly the Canadian Rangers. Moreover, **there is no indication that Canada's economy will greatly expand in the foreseeable future to produce the necessary surplus wealth to pay for a sizeable increase in an Arctic force**. Canada's economic growth has not been great over the last decade, let alone ever. Thus, Canada presents a very vocal case for the Arctic but has been unable to completely back up its claims with the necessary increases in personnel, materials, ships, and money, which is very telling for the future. If not by now, then when?17 If Canada is unwilling to shift or produce enough resources to create a sufficient Arctic force that is capable of fully securing the region over the three thousand miles of waterways, plus above and beneath the surface, then it opens up the possibility that other forces outside the region may move in and claim the trillions of dollars in natural resources. Russia is an obvious pursuer. The U.S. is another option. China, with its massively growing need for oil—especially when it runs out of much of its own domestic sources in approximately 10 years—will be looking everywhere for oil opportunities. Any country that can move oil rigs and mining companies into the Arctic area, operate them and maintain them, and have enough forces to possibly defend them will have trillions of reasons to act pro-actively. Hypothetical but quite possible. Can or will Canada defend this entire region on its own? Can or will Canadians risk an all-out war with Russia, China, or some other major power for control over all of the Arctic resources? Is Canada even capable of going into the ring against any of the major powers, especially if and when there is a great need and crisis in energy resources?18

**Arctic conflict leads to nuclear war**
Wallace and Staples '10- * Professor Emeritus of the University of British Columbia, ** President of the Rideau Institute (Michael and Steven, 3-10, "Ridding the arctic of nuclear weapons, a task long overdue," Canadian Pugwash Group, http://www.pugwashgroup.ca/events/documents/2010/2010.03.11-arctic-nuclear-report.pdf)LC
Testifying before the U.S. House Armed Services Committee, General Renuart, Commander of U.S. Northern Command and NORAD, said that in 2008, pairs of Russian TU-95 Bear-H aircraft flew into NORAD's Air Defense Identification Zone on seven separate occasions. All but one of these flights was unannounced, but foreign planes never violated North American airspace.14 On another occasion, Renuart told a Canadian audience that "from the end of the Cold War to 2006, there were 10 or 11 or 12 Russian patrols up in the Arctic region. Since 2007, there have been a total of 30."15 The February aircraft incident, which evoked such a strong reaction from the Canadian government, stands in stark contrast to another incident involving

nuclear-capable forces and Canadian sovereignty. In August 2008, Canadian Forces quietly deployed naval and air assets to investigate a report of a foreign submarine sighting near the eastern entrance of the Northwest Passage. The sub sighting, based on what the military described as a reliable report from hunters, occurred near the northern end of Baffin Island on August 9, 2008. The sighting was linked to a report a few days earlier of a mysterious explosion in the area, widely reported in the media. Another group of hunters heard the explosion, which was so large it shook their cabin. They emerged and saw a plume of black smoke some distance away. But in the case of the explosion and submarine sighting, the military commented only on the explosion, and rewrote planned responses for journalists, removing any reference to the submarine. What accounts for the sharp contrast between the government's bellicose pronouncements in response to a routine Russian training flight and its attempts to hide a submarine sighting near the entrance of the Northwest Passage? An obvious explanation is the difference in the Canadian Forces capability to respond to aircraft and submarine intrusions. Bomber flights are easily detectable on radar, and Canada can scramble its F/A-18 fighters to intercept the Russian aircraft. But we have no way of identifying or monitoring submarines, nor can we intercept them; in fact, the sub could have belonged to one of our allies.

**Arctic conflict escalates**

Milenin '14- reporter, the Voice of Russia (Grigory, 4-28, "Arctic: the most important area of Russia's national interest," The Voice of Russia, http://voiceofrussia.com/news/2014_04_28/Arctic-the-most-important-area-of-Russias-national-interest-5376/)LC

The world is shaken by armed conflicts, the tension is growing between the opposing geopolitical forces and the statements made by the large world players regarding their claims on the energy resources of our planet sound increasingly assertive. One of the main problems is that the West is convinced that Russia has no right to own the largest Arctic territory, its subsoil and the seas. But does the West have the right to think that? The Arctic's hydrocarbon and mineral resources, the greatest part of which lies on the Russian shelf, bothers the minds of our European and American partners. One can often hear "sentimental" statements of foreign politicians that the Arctic with all its natural riches should become common property of the world community. In the future such statements can be replaced by real threats, thinks Ivan Konovalov, director of the Center for Strategic Conjuncture. "There will be a serious military-diplomatic battle, which will include not only Arctic states - Canada, Russia, the US, Norway and Denmark, but also countries located far from that region. I have no doubt that China will take part in that, as well as other countries interested in the use of Arctic resources. The rhetoric at the diplomatic level will be very tough. And the one who does not have a military component added to the diplomatic argument always looses." That is why the Russian leadership has made the decision to fully return Russia's armed forces to the Arctic arena as one of the country's main national priorities. However, a lot of work is at store to restore the infrastructure, which in 1990s was completely destroyed, saysMikhail Khodarenko, editor-in-chief of the Military Industrial Courier newspaper.

# 2NC GAS K/T ECON

**Exports key to the Canadian economy**
Sumner 11- economist for ATB financial (Dan, "Natural Gas fuels Canada's economic engine", Troy Media, http://www.troymedia.com/2011/08/24/natural-gas-fuels-canadas-economic-engine/)//WK
Natural gas often flies under the radar compared to its more glamorous and headline-catching partner, oil. But the numbers show it plays a considerable role in the Canadian economy. Putting an exact dollar value on the size of the Canadian natural gas industry is nearly impossible because it is intertwined with so many other industries and because there are so many indirect effects to account for. However, an analysis of available numbers shows three things: natural gas accounts for a significant proportion of Canada's exports, it is responsible for much of the exploratory drilling in western Canada, and is responsible for a sizeable per centage of Canadian economic activity. Canada is the world's third largest producer of natural gas (behind the United States and Russia) and exports approximately 60 per cent of its production to the U.S. During the mid-decade energy boom, a common perception was that it was primarily an oil boom. While the oil sands played a prominent role, Canadian gas exports were larger than oil exports from 2000 until 2006, and there were more than twice as many gas wells drilled as oil wells. One guess: $100 billion A special report prepared by IHS Global Insight for the American Natural Gas Alliance estimated the value of Canada's gas industry at just more than $100 billion in 2008. Of the $100 billion total, $70 billion is directly generated by the industry and the other $30 billion comes from indirect (industries that supply the gas sector) and induced (income spent by those employed in the gas sector) economic activity. To put $100 billion in perspective, Canada's nominal gross domestic product (GDP) was $1.6 trillion in 2008. This would make natural gas ultimately responsible for 6.7 per cent of Canadian economic activity. In Alberta, by far the largest participant in the gas sector, that proportion surges to 28 per cent and in British Columbia and Saskatchewan, gas accounts for roughly five per cent of the economy. While natural gas and its offshoots do directly accrue economic benefits to every province, more than 85 per cent of the value added is in western Canada. Natural gas is also a large employer. However, because the industry is so capital intensive and has a concentration of higher wage positions, the total number of jobs generated by natural gas is much larger than just those working directly in the industry. The IHS survey estimates 189,000 people were directly employed in the gas sector in 2008 and the industry is ultimately responsible for 599,000 positions, when all the indirect and induced jobs are accounted for. That is roughly twice the number of Canadians employed in the entire agriculture sector. Gas helps harvest oil The majority of Canada's gas is produced in Alberta but, despite having less than four million people, the prairie province is also the largest user of gas at 39 per cent of the national total. This is largely because vast swaths of the fuel in the oil sands extraction process and to produce electricity. Ontario is the second largest user at 33 per cent. In terms of uses, Canadian industrial and commercial users account for 60 per cent of national consumption, while residential and electrical generation account for 26 per cent and 14 per cent respectively. Gas in power generation is growing in popularity as natural gas power plants have become more cost-effective and the environmental concerns associated with carbon emissions (i.e. coal) have moved to the forefront. Around 6.5 per cent of Canada's electricity comes from gas (although this proportion is much higher in some provinces in Alberta, for example, it's 40 per cent of total electricity capacity) and it is growing at the expense of coal. Because production often occurs in remote areas, the industry can give rise to towns that rely almost exclusively on the resource for their livelihood. In western Canada, and particularly in Alberta and B.C., there are numerous towns where, without gas extraction, the restaurants, bars, auto dealerships and various other businesses in these rural regions would wither. Even in some larger and more diversified

economies, such as Calgary, Fort St. John, Medicine Hat and Grande Prairie, many of the finance, retail and transportation industries would diminish in size significantly without the economic activity associated with gas. Provincial coffers The importance of natural gas goes even beyond generating jobs and GDP, it's also a crucial revenue source for Canada's provincial governments. At the peak of the gas price cycle in 2008 gas royalties provided $6.9 billion to provincial coffers in western Canada, more than the combined amount from conventional oil ($2.4 billion)

**Canada's natural gas trade spills over to the rest of their economy**

Kuykendall 6- former director of policy to a past Canadian Minister of Natural Resources and a former research fellow with Cardus (Russ, "Six Trade Corridors to the US: The Lifeblood of Canada's Economy", Cardus, http://www.cardus.ca/columns/447/)//WK

The Canada-US border is the crossing point for the largest merchandise trade relationship in world history. Driven by the Canada-US Free Trade Agreement and the NAFTA, Canada's merchandise exports to the US reached US$255 billion in 2004, while imports from the US were US$163 billion, for total two-way merchandise trade of US$418 billion, leaving Canada with a merchandise trade surplus of US$92 billion. In this article, adapted from the publication, Greenlighting Trade: A Trade Corridors Atlas, from the Work Research Foundation, the author drills down on the numbers and finds that Canada-US trade can be broken into six corridors, largely along regional and sectoral lines, such as the Ontario-Michigan automotive corridor, and the Alberta energy corridor. In A Special Relationship: Canada-US Trade in the 21st Century, a speech delivered to a Trade Corridors Roundtable in 2005, Allan Gotlieb argued for the deepening of bilateral channels between the two countries, given "a common commitment to values, principles and way of life that marks our relationship as different from that of most other nations, even the most friendly." Former ambassador Gotlieb advocates the broad strategy framed by common commitments that reflect the trading culture of Canada and the US. The following argues that these commitments and our trading culture are expressed in the various trading communities shaped by geography, the sectoral character of most trade, and by the myriad human and institutional relationships that make trade possible. Canada-US trade can best be understood framed by the concept of "trade corridors." The following proposes a sector-based and geographically conditioned argument for the "corridor character" of Canada-US trade. That Canada and the US cooperate in the production of goods and services across political boundaries within sectors, by geographic proximity, and by way of physical transportation infrastructure. Trade corridors tend to integrate the Canada and US economies. Trade corridors are more than transportation infrastructure. Therefore, trade corridors are defined as streams of products, services, and information moving within and through communities in geographic patterns according to a matrix or "culture" of trade agreements and treaties, statutes, delegated legislation, and custom that govern and guide trading relationships, institutions, and structures. In what follows, the six largest sectors of Canada's export trade to the United States, which illustrate the usefulness of the concept of trade corridors, are described. First, trade corridors are related to two other conceptual frameworks currently employed in understanding Canada's international trade, gateways and global supply chains. David Emerson was sworn into the Harper cabinet as minister of international trade and minister for the Pacific Gateway and the Vancouver-Whistler Olympics. Part of Emerson's title, minister for the Pacific Gateway, is indicative of a Canadian trade priority focusing on the Pacific Rim and, especially, development of trade with China. Canadian traders are enamoured of the prospects of reaching a market populated by more than 1.2 billion people. However, market access and penetration tends to flow in favour of the Chinese. This is clearly illustrated in respect of Canada's largest trading partner and export market, the United States. From 2000 to 2004, China's merchandise exports to the US grew from about US$100 billion to US$196.2 billion, while US merchandise exports to China grew from about US$15 billion in 2000 to US$32.6 billion in 2004. The US trade deficit

with China increased US$38.6 billion to US$163.6 billion from 2003 to 2004. The clear advantage went to China. For comparison (from the same US government source), Canadian merchandise exports to the US rose from about US$235 billion in 2000 to US$255.7 billion in 2004. US merchandise exports to Canada rose slightly from about US$160 billion in 2000 to US$163.2 billion in 2004. The US trade deficit with Canada increased US$17.2 billion (23 percent) to US$92.5 billion from 2003 to 2004. While China's merchandise exports to the US rose in 2004 over 2003 by US$44.5 billion or 29 percent, Canada's merchandise exports to the US in the same period increased by US$31.6 billion or 14 percent. Again, advantage China. For purposes of comparison, Canada's merchandise exports to China increased from US$3.4 billion in 2003 to US$5.1 billion in 2004 and to US$5.8 billion in 2005. Canada's merchandise imports from China increased from US$13.2 billion in 2003 to US$18.5 billion in 2004 and to US$24.3 billion in 2005. Yet again, the advantage clearly goes to the Chinese. To frame Canada's international trade policy in terms of gateways focused on trade with China is to reinforce their competitive advantage, not ours. This is true for the bilateral trade, and for Canada's competition with China in the US merchandise market. The latter is the case since a gateway's framework tends to divert Canada's international trade focus from the world's largest merchandise market, and from the merchandise market, where Canada holds the greatest competitive advantages in terms of geographic proximity, language, and culture — including business culture. That market, of course, is the United States. In February 2006, the federal Department of Industry hosted a conference in Ottawa designed to educate public servants with the department about the concept of "the global supply chain." Over the last few years, Industry Canada has pursued research framed by this concept, seeking to drill down onto how goods and services move, not just through the Canadian economy, but through Canadian industry to and from the world. In effect, "the global supply chain" is framing Industry Canada's efforts to understand the flows of Canadian exports and imports — Canada's international trade. Global supply chain research points to how Canada's trade is organized mainly in terms of businesses, offering a description of Canada's trade flows. It is helpful. But this presents an inadequate explanation by itself of Canada's trade capable of informing and providing direction to Canada's international trade policy. That said, both "gateways" and "global supply chains" are conceptual metaphors designed to bring coherence to our understanding of international trade. "Trade corridors," however, is a metaphor grounded in history that offers greater coherence, insight, and a more fully rounded understanding of international trade, and allows us to account for Canada's most important trading relationship — that with the US. Canada's challenge is to maintain and expand the infrastructure necessary to keeping itself accessible to the world, especially to the US. The Canada- US trading relationship is by far the largest and most valuable in the world. In terms of merchandise trade, Canada's exports to the world in 2004 were valued at $411.3 billion. Exports of merchandise to the United State amounted to $348.1 billion, constituting 85 percent of Canada's merchandise exports. Canada's dependence on the US market for merchandise exports can hardly be overstated. For example, over half of Ontario's output is in exports to the US. Canada's dependence on the US market for services exports is similar. In 2004, Canadian service exports globally were $62.3 billion. Service exports to the United States were valued at $36.0 billion. If trade is the foundation on which Canada's economy is built, then trade with the United States is the cornerstone. Our living standards and our ability to fund health care, education, old age pensions, and other social programs are predicated on trade, especially Canada-US trade. Canada's trade is characterized by a heavy dependence on trading with the United States, and on a Canada-US economy that is integrated by way of trade. This integration of the Canada-US economy is represented in Canada's top six export sectors to the United States: motor vehicles and parts, mineral fuels and oils, machinery and equipment, forest products, commercial services, and agricultural and fish products. These six sectors illustrate how Canada's trade is shaped by its sectoral character, and how these sectors' regional orientations — or, concentration in certain geographic regions of North

America — tend to integrate the Canadian and US economies regionally. The integration of these sectors of trade constitutes trade corridors. Since exports of merchandise and services are concentrated by region, the trade corridors account that follows focuses on the region, province, or provinces that are the primary source of these exports from Canada and their destinations in the United States. This research looks at Canada to US merchandise trade in two ways: first, by industry; and then by product and service. However, for consistency, the statistics cited and the analysis given is based on the value of export products and services. 1. The Ontario-Michigan automobile manufacturing trade corridor (figure 1). Canada's exports of "motor vehicles, trailers, bicycles, motorcycles and other similar vehicles" in 2004 to the world were valued at $80.1 billion. Canada's exports to the United States in this category totalled $77.6 billion in 2004. This export category accounts for a favourable trade balance — a trade surplus — of $28.3 billion with the US. Some 95 percent of Canada's exports to the US from automobile manufacturing come from Ontario. Ontario's merchandise exports to the world in all categories amounted in 2004 to $199 billion, of which $180 billion, or 90 percent, went to the United States. Of Ontario's exports to the world, $75.8 billion, or 38 percent, for 2004 were in the automotive industry. From Ontario, automobile manufacturing exports were responsible in 2004 for $73.8 billion or 41 percent of Ontario's total merchandise exports to the US. Over the last five years, Ontario's exports in this category were relatively stable, averaging $75 billion, albeit trending slightly downward overall. That Ontario is engaged in automobile manufacturing with Michigan becomes clear when one considers that Ontario's exports in this category to Michigan are valued at $46.6 billion. Compare this with exports to other states and regions of the US, which are relatively evenly distributed, except for California, which receives automobile manufacturing exports from Ontario valued at $13.8 billion. Nearly 60 percent of Ontario's exports to the US in this category are to Michigan. As Stephen Blank of Pace University, New York City, put it: "We (Canada and the United States) make cars together." To narrow or focus this remark further, Ontario and Michigan make cars together. What this suggests is the integration of a Canada-US auto industry concentrated in the Ontario- Michigan trade corridor, which then distributes the products of this industry in a supply chain throughout the rest of Canada and the United States. Consequently, the greatest strain on physical infrastructure — highways, ports and canals, railways, bridges and tunnels, and customs and border facilities — are those incoming and outgoing between Ontario and Michigan. But the greatest strain is on infrastructure from Ontario to Michigan. The strain placed on this infrastructure should not be underestimated: 27 percent of all Canada-US merchandise trade exports pass over the Ambassador Bridge between Windsor and Detroit. 2. The Alberta mineral energy trade corridor (see figure 2). Canada's total merchandise exports to the world in the category of "mineral fuels, mineral oils, bituminous substances and mineral waxes" in 2004 were valued at $68.6 billion. Canada's exports to the US in this merchandise category were valued at $66.5 billion in 2004, or almost 97 percent of its world exports. Canada's trade balance with the US in this sector alone is $43.4 billion in Canada's favour. This sector is responsible for almost 77 percent of Canada's overall trade surplus with the US accumulating to $56.6 billion in 2004. Some 69 percent of all mineral energy exports in this category from Canada to the US, valued at $46.1 billion, comes from Alberta. Alberta's 2004 merchandise exports to the world are valued at $67.3 billion, of which $59.5 billion, or 88 percent of the total, go to the United States. Of Alberta's exports to the US, 77 percent are "mineral fuels, mineral oils, bituminous substances and mineral waxes" valued at $46.1 billion. Year on year, Alberta's mineral energy exports increase at a remarkable rate. Alberta's mineral energy exports to the US increased 6.8 percent from 2000 to 2001, decreased 17.5 percent from 2001 to 2002, increased 32.6 percent from 2002 to 2003, and increased 15.2 percent from 2003 to 2004 — for a total increase in the value of mineral energy exports of 34.6 percent from 2000 to 2004. Alberta's exports of oil and gas follow a network of energy pipelines, and as such the destinations of these exports follow the pipeline network. From the point of view of infrastructure, the Alberta mineral energy trade corridor is defined by this pipeline network. Its number one and number two export destinations — to Illinois, valued at $9.8 billion, and to Washington State, valued at $6.8 billion, or more than one-third of total mineral energy exports to the US — are the sites of major pipeline terminals. While the key to understanding Canadian and US automobile manufacturing is that it is a North American automobile manufacturing industry centred in Ontario and Michigan, mineral energy exports from Canada are somewhat different. Here, the key things to keep in mind are that Canada is a net exporter — by far — of mineral energy to the US, and that mineral energy production is concentrated in Alberta. Canada's production of oil is far outstripping domestic demand and is projected over time to approach US levels of oil production. Canada's demand for natural gas is a fraction of domestic natural gas production, most of which is exported to the US. So, while there is a North American mineral energy industry, Canada's role and, especially, Alberta's, is as **a net supplier of mineral energy to US demand.** Alberta's mineral fuels industry — "the oil patch" — is poised for another stage of

if not unprecedented, near-unprecedented growth, with the potential to create thousands of new jobs in Canada. According to the Alberta Chamber of Resources, the industry is poised to see its production increase "more than twofold to five million barrels a day, or 16 percent of North American demand by 2030," and to "generate an additional $40 billion of economic growth in Canada." More than $100 billion of development construction has been announced in the Fort McMurray- Athabasca oilsands, alone. The Alberta Chamber of Resources calls for advance planning to keep pace with development of supply and demand as this trade corridor expands and intensifies. As Alberta's production of natural gas from northwestern Alberta and production of oil sands crude from northeastern Alberta increases along with US demand, exports will outstrip pipeline capacity. As more production of offshore crude comes onstream from Atlantic Canada, pipeline capacity must be increased in order to move supply to US markets. But the big player in the Canadian export market for mineral energy is, and will remain for some time to come, Alberta.

# AT: CHINESE EXPORTS SOLVE

**No asian exports-Canada is just posturing and environmental oppostion**
Marlow 6/22- Asia-pacific correspondent for The Globe and Mail (Iain, "Diversify exports with more Asian trade, Chinese diplomat says", The Globe and Mail, http://www.theglobeandmail.com/news/british-columbia/diversify-exports-with-more-asian-trade-chinese-diplomat-says/article19285775/)//WK
Indeed, as Enbridge praised the federal approval – and pledged to meet the 209 conditions set out by the National Energy Board, as well as five laid down by B.C. – First Nations groups and environmentalists began to detail their renewed opposition, pledging the pipeline will never be built. Protests were planned, some for that day, and a group of First Nations announced they would fight the pipeline in the courts. "Enbridge's Northern Gateway tanker and pipeline project exposes all communities from Alberta to the Pacific Coast to the undeniable risk of pipeline and supertanker oil spills," the groups said in a statement. Ms. Liu said opposition is to be expected, given the environmental risks, but she maintained that people would support the project if the government ensured the pipeline was built and operated safely. "People worry about it leaking, the pollution. That's understandable, because with all industry there will always be pollution, some accidents, some damages," she said. "To be well prepared is very important. … The government needs to do more for safety. Then people will feel better, more comfortable, to accept these projects." At the same time, Ms. Liu suggested that the B.C. government was overreaching a bit on its rhetoric surrounding trade with China. She said that when she arrived, the breadth of B.C. exports to China – such as timber or cherries – was smaller than she expected. And despite B.C. Premier Christy Clark's high-profile push to export liquefied natural gas from Kitimat, B.C., and other coastal terminals to Asia, Ms. Liu noted that there is still barely anything to show for it – and, as with Northern Gateway, there is local opposition to the plan. However, Ms. Liu did note it is important to follow local negotiation practices, and said she does understand that it is important to first consult with Canada's First Nations. "I've been to Kitimat, [to] Prince Rupert. Most of the work sites still are only at a very basic stage. They're still cleaning the ground and designing. It might take two or three years to get the products out," she said. "We would like to wait and see as a buyer. Sometimes you want to wait for the good price. So people are talking about China as one of the buyers, but it is too early to say we're a buyer, because you haven't got the product … But we do have interest."

**Canada is opposed to increased Asian trade**
Marlow 6/22- Asia-pacific correspondent for The Globe and Mail (Iain, "Polls suggests Canadians appear less interested in building relations with East", The Globe and Mail, http://www.theglobeandmail.com/news/british-columbia/polls-suggests-canadians-appear-less-interested-in-building-relations-with-east/article19281761/?page=all)//WK
The session is an example of how businesses in Vancouver pay close attention to economic opportunities emanating from the rise of China – a small window into the province's broader, Asia-focused economy. B.C. now exports 44 per cent of its goods to Asia – nearly as much as it does to the U.S., and far more than any other Canadian province – and has business people and politicians who relentlessly pursue opportunities across the Pacific. But unlike B.C., many think Canada as a whole is not as eastward-facing as it should be, and lacks a coherent national strategy toward the region. Indeed, even as surging economies across the Asia-Pacific region reorder the global economy, new polling results show Canadians are becoming less interested in attracting investment from Asian countries and see their economic future less tied to Asia. As other countries strike free trade agreements in Asia, boost diplomatic presence in the region and reorient their education systems to teach Asian languages and culture, some wonder whether

Canada is looking east fast enough. For obvious reasons, Canada has long concentrated on southward ties with the United States. But even as the rise of China and other Asian economies has changed the landscape of global manufacturing and created new markets for products like BlackBerrys – which still sell well in emerging markets such as Indonesia – Canada has actually grown colder toward the idea of increasing ties with Asia. New poll results from the Asia Pacific Foundation of Canada, a non-profit which promotes ties with Asia, show that the number of Canadians who want closer ties with countries such as China or South Korea has fallen since last year – to 41 per cent of those polled, from 50 per cent. The percentage of those who think economic and political relations with nations in East, Southeast and South Asia should be Canada's top foreign policy priority also dropped sharply, to just 37 per cent in 2014 from 55 per cent in 2012 . The fall-off came mostly from Canadians aged 55 or older and were particularly pronounced with regard to China, which is Canada's second largest trading partner. There was also less support for teaching Asian languages or history, even as the region grows in importance. People fear Chinese investment in Canada's natural resources, and prefer to do business with like-minded democracies. Many suggest Canadian politicians and business leaders remain reluctant to make the dramatic changes in strategy, trade and education that other countries, such as Australia, are already making for the new century.

# AT: PIPELINE LINK TURN

**Pipelines are inevitable and don't help the economy**

Austen 6/17- correspondent for the New York Times focusing on Canadian issues (Ian, "Despite Protests, Canada Approves Northern Gateway Oil Pipeline", New York Times, http://www.nytimes.com/2014/06/18/business/energy-environment/canada-approves-northern-gateway-pipeline.html?_r=0)//WK

The Canadian government's approval of a major pipeline running from the Alberta oil sands to a new port on the coast of British Columbia has intensified opposition from aboriginal groups, environmentalists and community advocates. The Northern Gateway project, which the government approved on Tuesday as expected, would send heavy, oil-bearing bitumen to Asia, giving Canadian producers better access to the world markets. The pipeline, being built by Enbridge, has been championed by the federal government as a way to diversify Canada's energy industry from its current dependence on exports to the United States. But opponents in British Columbia, who span the political spectrum, threatened to block the pipeline altogether. The fear is that the pipeline would make the province vulnerable to an oil spill, damaging the rugged and scenic coastline. Tom Mulcair, the leader of the opposition New Democratic Party, said that Prime Minister Stephen Harper and his Conservative government had ignored broad public opinion. "Stephen Harper continues to act as if this is 1948," Mr. Mulcair told reporters outside of the House of Commons. "You can no longer force pipelines from the top down." Calling oil tankers off the coast of British Columbia "madness," Mr. Mulcair said that the decision was a " threat to social order, social peace." In the statement, Greg Rickford, the minister of natural resources, acknowledged that Enbridge's efforts to win over British Columbia and native groups had fallen short. "The proponent clearly has more work to do in order to fulfill the public commitment it has made to engage with aboriginal groups and local communities." The president and chief of Enbridge, Al Monaco, seemed to agree during a conference call with reporters. "The economic benefits are not enough to secure public support," he said. The company must meet about 100 conditions imposed by the regulator before construction begins. Mr. Monaco declined to say how long that would delay construction, but he suggested at one point that it would take at least four years. "We're not going to be driven by our calendars or our watch here," he said. Northern Gateway has become something of backup for Canada, as approval for the Keystone XL pipeline remains mired in Washington. If built, Northern Gateway would ship about 500,000 barrels of bitumen a day to the coast compared with the 700,000-barrel-a-day capacity of Keystone XL, which would take oil sands production to the Gulf Coast of the United States. When Northern Gateway is combined with the country's other pipeline plans, Canada could expand shipments from the oil sands by three million barrels a day. But Enbridge faces a series of challenges to build the Northern Gateway pipeline. The National Energy Board, which originally reviewed the proposal, attached a list of 209 conditions to the deal, although none of them are viewed as insurmountable. The government's approval on Tuesday is also predicated on fulfilling those conditions.

# DRILLING DAS

# 1NC UQ

## Moratorium means gas production is at a virtual stand-still

**IER, '12** (Institute for Energy Research, 15 March 2012, "Fossil fuel production on federal lands at 9 year low," http://www.instituteforenergyresearch.org/2012/03/15/fossil-fuel-production-on-federal-lands-at-9-year-low/)//CC

Fossil fuel (coal, oil, and natural gas) production on Federal and Indian lands is the lowest in the 9 years EIA reports data and is 6 percent less than in fiscal year 2010. Crude oil and lease condensate production on Federal and Indian lands is 13 percent lower than in fiscal year 2010. Natural gas production on Federal and Indian lands is the lowest in the 9 years that EIA reports data and is 10 percent lower than in fiscal year 2010. Natural gas plant liquids production on Federal and Indian lands is 3 percent lower than in fiscal year 2010. Coal production on Federal and Indian lands is the lowest in the 9 years of data that EIA reported and is 2 percent lower than in fiscal year 2010. See also–The Myth that the U.S. Only Has 2% of the World's Oil Fossil Fuel Production on Federal Lands Crude oil production on Federal and Indian lands decreased 13 percent from 739 million barrels in fiscal year 2010 to 646 million barrels in fiscal year 2011. Production of crude oil on Federal lands is dominated by offshore production, which fell by 17 percent in fiscal year 2011, mostly notably due to government actions taken following the oil spill in the Gulf of Mexico in 2010. These actions include a moratorium on offshore drilling by the Obama Administration, followed by a permit moratorium. Only recently has the Obama Administration leased any federal land offshore to oil and gas drilling. Natural gas production on Federal and Indian lands decreased every year since fiscal year 2003, the earliest fiscal year EIA reported data. In fiscal year 2011, natural gas production on federal and Indian lands was 4,859 billion cubic feet, 10 percent less than in fiscal year 2010, and 31 percent less than in fiscal year 2003. Offshore natural gas production volumes have been on a consistent downward trend for the last 9 years, and are 63 percent less in fiscal year 2011 than in fiscal year 2003. Natural gas plant liquids production on Federal and Indian lands peaked in fiscal year 2010 at 115 million barrels and declined to 111 million barrels in fiscal 2011, down 3 percent. Coal production on Federal and Indian lands peaked at 509 million short tons in fiscal year 2008 and decreased each year since then. In fiscal year 2011, coal production on Federal and Indian lands was 470 million short tons, down 2 percent from fiscal year 2010 production and 8 percent from the peak in fiscal 2008. Department of Interior Data EIA received the data from the Office of Natural Resource Revenues (ONRR) in the Department of Interior. The data contain production on federal and Indian lands, both onshore and offshore. They include production volumes for which royalties were paid and production volumes in which no royalties were paid due to lease provisions and/or production transferred to the Strategic Petroleum Reserve under the Royalty-in-Kind programs. According to ONRR, the data can change, but according to EIA, the big picture story will remain. Conclusion The big picture is clear that government policies undertaken by the Obama Administration have produced a significant decline in offshore oil production on federal lands in fiscal year 2011. That is certainly not a way to increase domestic production of oil and keep oil and thus gasoline prices in check.

# 2NC UQ

## Obama recently instituted a 30-year moratorium on offshore drilling – that locks away 98% of natural gas resources

**Pyle, 7/9** president of the Institute for Energy Research, founder of his own consulting firm, served as vice president of the Rhoads Group, served as director of federal affairs for a major integrated manufacturing and services company focusing on energy, environment, regulatory and transportation issues, held numerous positions on Capitol Hill including serving a policy analyst for the Majority Whip of the U.S. House of Representatives and as staff director for the Congressional Western Caucus, as well as other legislative staff positions, holds a B.A. in Political Science from the University of Southern California (Thomas J. Pyle, The Washington Times, 9 July 2012, "PYLE: Energy Department sneaks offshore moratorium past public," http://www.washingtontimes.com/news/2012/jul/9/energy-department-sneaks-offshore-moratorium-past-/)//CC
While the Obama administration was taking a victory lap last week after the 5-4 Supreme Court decision to uphold the president's signature legislative accomplishment, Obamacare, the Interior Department was using the media black hole to release a much-awaited five-year plan for offshore drilling. That plan reinstitutes a 30-year moratorium on offshore energy exploration that will keep our most promising resources locked away until long after President Obama begins plans for his presidential library. Given the timing, it is clear that the self-described "all of the above" energy president didn't want the American people to discover that he was denying access to nearly 98 percent of America's vast energy potential on the Outer Continental Shelf (OCS). The Outer Continental Shelf Lands Act (OCSLA) of 1953 provided the interior secretary with the authority to administer mineral exploration and development off our nation's coastlines. At its most basic level, the act empowers the interior secretary - in this case, former U.S. Sen. Kenneth L. Salazar of Colorado - to provide oil and gas leases to the highest-qualified bidder while establishing guidelines for implementing an oil and gas exploration-and-development program for the Outer Continental Shelf. In 1978, in the wake of the oil crisis and spiking gasoline prices, Congress amended the act to require a series of five-year plans that provide a schedule for the sale of oil and gas leases to meet America's national energy needs. But since taking office, Mr. Obama and Mr. Salazar have worked to restrict access to our offshore oil and gas resources by canceling lease sales, delaying others and creating an atmosphere of uncertainty about America's future offshore development that has left job creators looking for other countries' waters to host their offshore rigs. More than 3 1/2 years into the Obama regime, nearly 86 billion barrels of undiscovered oil on the Outer Continental Shelf remain off-limits to Americans. Alaska alone has about 24 billion barrels of oil in unleased federal waters. The Commonwealth of Virginia - where Mr. Obama has reversed policies that would have allowed offshore development - is home to 130 million barrels of offshore oil and 1.14 trillion cubic feet of natural gas. But thanks to the president, Virginians will have to wait at least another five years before they can begin creating the jobs that will unlock their offshore resources. Once you add those restrictions to the vast amount of shale oil that is being blocked, the administration has embargoed nearly 200 years of domestic oil supply. No wonder the administration wanted to slip its plan for the OCS under the radar when the whole country was focused on the health care decision.

## Interior Department ban on offshore drilling of the Outer Continental Shelf

**Pyle 7/10 (Thomas J., July 10, 2012, "Energy Department sneaks offshore moratorium past public; Jobs and oil-supply potential are shut down," The Washington Times, lexis)**
While the Obama administration was taking a victory lap last week after the 5-4 Supreme Court decision to uphold the president's signature legislative accomplishment, Obamacare, the Interior Department was using the media black hole to release a much-awaited five-year plan for offshore drilling. That plan reinstitutes a 30-year moratorium on offshore energy exploration that will keep our most promising resources locked away until long after President Obama begins plans for his presidential library. Given the timing, it is clear that the self-described "all of the above" energy president didn't want the American people to discover that he was denying access to nearly 98 percent of America's vast energy potential on the Outer Continental Shelf (OCS).¶ The Outer Continental Shelf Lands Act (OCSLA) of 1953 provided the interior secretary with the authority to administer mineral exploration and development off our nation's coastlines. At its most basic level, the act empowers the interior secretary - in this case, former U.S. Sen. Kenneth L. Salazar of Colorado - to provide oil and gas leases to the highest-qualified bidder while establishing guidelines for implementing an oil and gas exploration-and-development program for the Outer Continental Shelf. In 1978, in the wake of the oil crisis and spiking gasoline prices, Congress amended the act to require a series of five-year plans that provide a schedule for the sale of oil and gas leases to meet America's national energy needs.¶ But since taking office, Mr. Obama and Mr. Salazar have worked to restrict access to our offshore oil and gas resources by canceling lease sales, delaying others and creating an atmosphere of uncertainty about America's future offshore development that has left job creators looking for other countries' waters to host their offshore rigs. More than 3 1/2 years into the Obama regime, nearly 86 billion barrels of

undiscovered oil on the Outer Continental Shelf remain off-limits to Americans. Alaska alone has about 24 billion barrels of oil in unleased federal waters. The Commonwealth of Virginia - where Mr. Obama has reversed policies that would have allowed offshore development - is home to 130 million barrels of offshore oil and 1.14 trillion cubic feet of natural gas. But thanks to the president, Virginians will have to wait at least another five years before they can begin creating the jobs that will unlock their offshore resources.¶ Once you add those restrictions to the vast amount of shale oil that is being blocked, the administration has embargoed nearly 200 years of domestic oil supply. No wonder the administration wanted to slip its plan for the OCS under the radar when the whole country was focused on the health care decision.¶ But facts are stubborn things, and the Obama administration cannot run forever from its abysmal energy record. In the past three years, the government has collected more than 250 times less revenue from offshore lease sales than it did during the last year of the George W. Bush administration - down from $9.48 billion in 2008 to a paltry $36 million last year. Meanwhile, oil production on federal lands dropped 13 percent last year, and the number of annual leases is down more than 50 percent from the Clinton era.¶ Under the new Obama plan, those numbers will only get worse. The 2012-17 plan leaves out the entire Atlantic and Pacific coasts and the vast majority of OCS areas off Alaska. It cuts in half the average number of lease sales per year, requires higher minimum bids and shorter lease periods and dramatically reduces lease terms. Yet, somehow, we're supposed to believe that our "all of the above" president is responsible for increased production and reduced oil import.

# 2NC ARCTIC UQ

## There won't be any drilling in the Arctic now- shell is pulling out- only the plan causes arctic drilling

**Macalister 1/30** (Terry Macalister, the Guardian, 1/30/14, "Shell shelves plan to drill in Alaskan Arctic this summer," http://www.theguardian.com/business/2014/jan/30/shell-shelves-alaskan-arctic-drilling-oil)//RTF

Shell's controversial presence in the Arctic, US shale lands and the Niger delta is in doubt after the oil group announced a sweeping strategic overhaul that includes the suspension of its Alaskan drilling programme. Taking the knife to some of his predecessor's pet projects, new chief executive Ben van Beurden said that the Anglo-Dutch company might have gone "too quickly" into shale exploration in the US and signalled a partial or total retreat from its onshore operations in Nigeria. Van Beurden's plans, including a multibillion-pound programme of disposals and writedowns, were announced in the wake of a tumultuous fourth quarter that saw earnings plunge 71% to $2.1bn (£1.3bn) while oil and gas production fell 5%. "We have not always made the right capital choices," van Beurden said at a briefing in London as he revealed a $687m writeoff in North America from shale, gas and the damaged Arctic drilling rig Kulluk. He blamed poor markets as well as internal failures for its problems as he dramatically pulled the plug on Shell's controversial scheduled drilling programme in the Alaskan Arctic this summer. Van Beurden admitted the exploration drive in the Chukchi and Beaufort seas, which has cost $5bn so far, was "under review" amid a torrent of negative campaigning from green groups. A swath of onshore shale oil and gas assets in North America, with a balance-sheet value of $24bn, are also being considered for disposal or writedowns, while $1bn has been knocked off US shale drilling planned for this year. "You could argue we went in too far, too quickly [into shale]," he said. Van Beurden also made clear that Nigeria, once a key part of the Shell empire but a country where onshore operations have been subjected to repeated physical attacks, was being prepared for a future selloff or major scaling-back. "We have seen a very difficult security situation for a number of years ... What really do we have as value-added in this?" he asked. Van Beurden, who took over from Peter Voser at the start of 2014, confirmed that annual profits, on a current cost of supply basis, had slumped 48% to $16.7bn despite very high oil prices, although US gas prices have been low.He is expected to give more details of his strategy after a management day on 13 March. "We are making hard choices in our worldwide portfolio to improve Shell's capital efficiency," Van Beurden said. "Our ambitious growth drive in recent years has yielded a step-change in Shell's portfolio and options, with more growth to come, but at the same time we have lost some momentum in operational delivery, and we can sharpen up in a number of areas," he added. Shares in Shell closed up 1% at £21.48. Shell still has drilling interests in a range of territories, including the US Gulf, Brazil, Norway, Russia and Mozambique. Group spending is to be slashed this year by 20% to $37bn and the moves to halt high-cost operations off Alaska were particularly welcomed by environmentalists. Greenpeace campaigner Charlie Kronick said: "The company has spent huge amounts of time and money on a project that has delivered nothing apart from bad publicity and a reputation for incompetence. The only wise decision at this point is for Mr Van Beurden to cut his company's losses and scrap any future plans to drill in the remote Arctic Ocean." Jacqueline Savitz, a vice-president at the Oceana conservation group, which had taken legal action to try to stop the oil company drilling, said: "Shell is finally recognising what we've been saying all along: that offshore drilling in the Arctic is risky, costly and simply not a good bet from a business perspective." The decision to shelve drilling off Alaska came alongside a $200m writeoff of expenses connected with the Kulluk drilling rig, which ran aground in 2012. It also follows a US court ruling that the US department of the interior had failed to consider all environmental impacts of exploration in the Chukchi and Beaufort seas when it gave Shell permission to drill. "This is a disappointing outcome, but the lack of a clear path forward means that I am not prepared to commit further resources for drilling in Alaska in 2014," van Beurden said. "We will look to relevant agencies and the court to resolve their open legal issues as quickly as possible," he added, indicating there could be huge writedowns emanating from the Arctic still to come. Meanwhile Shell said it had distributed more than $11bn to shareholders in dividends and expects to spend more in 2014. The basic financial results were known two weeks ago when the company issued a shock profit warning, but on Thursday Van Beurden brushed off suggestions that management must have seen the crisis coming and should have told the market quicker.

# 2NC ARCTIC PRECEDENT

**Sets a precedent which causes worldwide devastation**

**Boston Globe** (Boston globe, 2/24/02, lexis)//RTF

Yes, they are convinced that this ecosystem would be irreparably harmed for very little oil. But just as important, drilling in the Arctic, they argue, would undercut efforts to persuade other countries to preserve wild spaces. Bill Weber of the Wildlife Conservation Society (the low-profile but powerful group that runs the Bronx Zoo and conducts field work in 53 countries) is proud of this nature-loving American heritage. But he worries that America could turn into a rich and selfish nature bully. "We become a hypocritical nation if in conservation work we want the poorest countries to do all the heavy lifting," Weber says. Now the director of WCS programs in North America, Weber has worked in international conservation and once studied mountain gorillas with the legendary Dian Fossey. Many African nations have become passionate conservationists, Weber says. But they are astute when watching our behavior here. Weber cites the example of the Democratic Republic of the Congo. When the Nouabale-Ndoki national park was created in the early '90s, the Congolese gave up the chance to exploit $80 million of hardwood from the forest. Weber recalls that the minister of forestry in Congo asked him about the Pacific Northwest and the debate over spotted owls vs. logging jobs. "We can't lock up the rest of the world and not be working in our own backyard," Weber says. Randall Snodgrass works for the World Wildlife Fund, in the division of government relations. Should drilling begin in the Alaskan refuge, Snodgrass says, we will be subject to scrutiny from many other countries - countries that we've been wagging our finger at for some time. "The Japanese, for instance," Snodgrass says. "We are urging them not to take endangered whales illegally. We are urging them and many other countries to ensure that their fisheries' practices are sustainable. I do think that if the Congress and the new president were to open the Arctic National Wildlife Refuge up to drilling, it would reduce our standing with those countries that we are currently urging to develop more progressive positions." Snodgrass, who has worked to protect this area for more than 20 years, says surveys consistently show that most Americans want the refuge to stay untouched. He says most politicians realize that to go against this desire would be at their own peril - and he's wagering that George W. Bush will realize that, too. Weber is less sanguine. "The world's most profligate nation going after perhaps six months of fuel for our SUVs? Wrecking something as sublime as wilderness? What kind of example does that set? It's an outrage, a horrible example to the rest of the world." He maintains that we have to live by the standards we're so fond of setting for others. "Can you imagine what we would have to say if Tanzania wanted to turn a quarter of their wildebeest population into wildeburgers?"

# 1NC RUSSIA IMPACT

## Arctic drilling risks arctic escalation and a war with Russia

**Francis 2/11** (David, 2/11/14, editor-at-large for The Fiscal Times and John Travolta lookalike, "Four Threats to U.S. Security That No One Talks About," : http://www.thefiscaltimes.com/Articles/2014/02/11/Four-Threats-US-Security-No-One-Talks-About#sthash.eOlNeiHo.dpuf)//RTF

Last week, Director of National Intelligence James Clapper laid out a laundry list of threats to the United States, including China's growing military ambition, the growing risks from cyber-attacks, and Russia's continued rise -- all very serious, but all very well known. Buried deep in Clapper's Worldwide Threat Assessment were other, less known threats to American interests that could be just as dangerous as China's military expansion or Russia's ambition. And many of them have nothing to do with guns, bullets or bombs. Related: Legalizing Pot Makes Mexican Cartels Even More Dangerous If Clapper's assessment is accurate, everything from the weather to the rush to secure Arctic resources puts American lives at risk. And while many know that violence in Mexico contributes to violence here, there are other countries in Central America that also have a hand in drugs and the violence that goes with it on this side of the border. Here are four threats to the United States that no one talks about: Health Risks: Biological weapons have largely been forgotten after Saddam Hussein came up empty, undercutting the justification for the Iraq war. According to Clapper, it's naturally occurring biologics, not those manufactured in a lab, that pose a true threat to American interests. He also warned that many of the antibiotics used to treat common diseases like the flu are not as effective as they once were. And globalization is complicating the problem. Related: Now DOD Is in the Drug Business "Infectious diseases, whether naturally caused, intentionally produced, or accidentally released, are still among the foremost health security threats," Clapper wrote. "A more crowded and interconnected world is increasing the opportunities for human, animal, or zoonotic diseases to emerge and spread globally. Antibiotic drug resistance is an increasing threat to global health security. Seventy percent of known bacteria have now acquired resistance to at least one antibiotic, threatening a return to the pre-antibiotic era." He also warned that diseases like the H7N9 flu that emerged from birds in China could easily spread around the world. In China, the virus killed 20 percent of the people it infected. "Uncontrolled, such an outbreak would result in a global pandemic with suffering and death spreading globally in fewer than six months and would persist for approximately two years," he wrote. Extreme Weather Events: Most Americans assume that extreme weather events overseas have little impact on their own security. But Clapper warned that's not the case. Related: Extreme Weather Could Chill the Economy "Natural food-supply disruptions, due to weather, disease, and government policies, will stress the global food system and exacerbate price volatility," he wrote, meaning Americans are likely to pay more for food if these events become more common. Clapper warned that these kinds of events often occur in countries with weak political and economic infrastructures. Extreme weather weakens these institutions further, making them potential breeding ground for groups opposed to American interests. "Lack of adequate food will be a destabilizing factor in countries important to U.S. national security that do not have the financial or technical abilities to solve their internal food security problems," he wrote. The Arctic: Changing weather patterns that are warming the air over the Arctic also affect U.S. national security. Right now, there's a race between American, Canadian, Nordic and Russia companies to secure oil and natural gas drilling rights in areas where ice has receded. And Russia is not afraid to use its military to advance its interests there. Russian President Vladimir Putin has just ordered an increase in Russian troops there this year. "Some states see the Arctic as a strategic security issue that has the potential to give other countries an advantage in positioning in their military forces," Clapper warned. Lawlessness in Central America: Most Americans are well aware of the threat that drug cartels in Mexico pose to U.S. security. But Clapper warns a new zone of instability is being created in Central America -- Honduras, El Salvador, and Guatemala -- could spread north to the United States, just as violence from Mexican cartels has spread north of the border. "All three countries are facing debt crises and falling government revenues because of slow economic growth, widespread tax evasion, and large informal economies. Entrenched political, economic, and public-sector interests resist reforms," Clapper wrote. "Domestic criminal gangs and transnational organized crime groups, as well as Central America's status as a major transit area for cocaine from source countries in South America, are fueling record levels of violence."

# 2NC RELATIONS IMPACT

## Arctic drilling collapses US-Russia relations- Russia perceives it as part of their SOI

**Francis 2/25** (David, 2/25/14, editor-at-large for The Fiscal Times and John Travolta lookalike, "The Race for Arctic Oil: Advantage Russia vs. U.S.," http://www.thefiscaltimes.com/Articles/2014/02/25/Race-Arctic-Oil-Advantage-Russia-vs-US#sthash.HoBtDtAk.dpuf)//RTF

The United States and Russia are at odds over a host of issues, from Ukraine to Syria to Edward Snowden, prompting talks of a new Cold War. Their next confrontation could take place on the coldest place on earth. Last week, a Russian military official told Russian media that the Kremlin was forming a new strategic military command to protect its interests in the Arctic. It's part of a broader push from Moscow to establish military superiority at the top of the world. "The new command will comprise the Northern Fleet, Arctic warfare brigades, air force and air defense units as well as additional administrative structures," a source in Russia's General Staff told RIA Novosti last Monday, The formation of the new command follows a December 2013 order from Russian President Vladimir Putin to ramp up Russia's military presence in the Arctic. Putin said Russia was returning to the Arctic and "intensifying the development of this promising region" and that Russia needs to "have all the levers for the protection of its security and national interests." These interests are primarily energy related. As Arctic ice has melted, companies from Canada, Denmark, Norway, Russia and the United States - the five countries that have a border with the Arctic - have been rushing to secure rights to drill for oil and natural gas in places that are now accessible. Hundreds of billions of dollars are at stake. Experts estimate that the Arctic holds some 30 percent of the world's natural gas supply, and 13 percent of the world's oil. That's why companies like Royal Dutch Shell, the U.S.-based Arctic Oil & Gas Corp. and Russia's Gazprom have all been making exploration claims on land in the Arctic. Countries are making new claims in the Arctic as well. Each of the five nations with Arctic borders is allotted 200 nautical miles of land from their most northern coast. Putin's military expansion was in direct response to a claim of additional land by Canadian Foreign Minister John Baird, who last year asked scientists to craft a submission to the United Nations arguing that the North Pole belongs to Canada. The Canadian claim also asserts that it owns the Lomonosov Ridge, an underwater mountain range located between Ellesmere Island, Canada's most northern border, and Russia's east Siberian coast. In 2007, Russian scientists planted a flag on the ridge to claim it as Russian territory. Russia created the Northern Fleet-Unified Strategic Command to protect oil and gas fields on the Arctic shelf. Unfortunately for American companies, the Pentagon has fallen behind, having only two of the icebreakers necessary to navigate Arctic waters. According to the Congressional Research Service, Russia has 25, with six powered by nuclear energy. Part of the problem is costs; a new icebreaker costs $800 million, and the Coast Guard says it doesn't need new ones. But Alaska Democratic Sen. Mark Begich said that the Obama administration should make the Arctic more of a priority. Related: US Nukes: Now It's Our Turn to Catch Up to the Russians "It's like they've never heard of it," Begich said in a recent interview with Fox News. "With the Obama administration we've had to push back pretty hard to convince them and show them why they need to invest in not only icebreakers, but forward operating bases for the Arctic." New strategy The Arctic hasn't been strategically important to the Pentagon since the Cold War, when missile were tested there and U.S. and Soviet submarines patrolled its waters. But DOD stopped paying attention to the region when the Iron Curtain fell. As Arctic ice receded and the region became strategically important, DOD shifted its attention back north. Las November, it released a new Arctic strategy outlining American interests in the region. The new strategy calls for the Pentagon to take actions to ensure that American troops could repel an attack against the homeland from a foe based in the Arctic. It's short on specifics, but calls for increased training to prepare soldiers for fights in Arctic conditions and for collaboration with other federal agencies to determine what ice patterns would look like in the future. The document is careful to point out that the United States was willing to work with allies. However, it makes clear that the Pentagon believes the Arctic is becoming contested territory, and the DOD would act to protect American interests. "Throughout human history, mankind has raced to discover the next frontier. And time after time, discovery was swiftly followed by conflict," the document reads. "We cannot erase this history. But we can assure that history does not repeat itself in the Arctic."

# 2NC RUSSIA WAR LINKS

**Arctic drilling risks Russian escalation- Russia's gearing up to defend their claims**
**Reuters 12/10** (Reuters, 12/10/13, "New cold war: Russia eyes chilly Arctic in global energy play," http://www.cnbc.com/id/101262037#.)//RTF

President Vladimir Putin ordered Russia's military to increase its focus on the Arctic and finish plans by the end of the year to upgrade military bases in the resource-rich region where world powers jostle for control. Speaking to Defence Minister Sergei Shoigu, Putin praised the military's work in the Arctic, where Canada said on Monday it was claiming the North Pole as part of an broader claim on the region. The United States, Denmark and Norway are also pressing for control of what they consider their fair share of massive untapped oil and natural gas reserves. "I request that you pay special attention to the deployment of infrastructure and military units in the Arctic," Putin said, speaking at a Defence Ministry board meeting. "By the end of the year it is planned - and I expect it will be done ... the renewal of the Tiksi airfield and completion of construction work on the Severomorsk-1 airfield," he said in televised comments. Russia has already completed work on renovating an airfield on the Novosibirsk Islands, Putin said, which was abandoned in 1993. Earlier this year Moscow sent 10 warships and four icebreakers to the islands in a show of force. Underscoring Moscow's sensitivity over Arctic claims, Russia arrested 30 people on board a Greenpeace ship during a September protest against Russian offshore Arctic drilling. They now face charges carrying seven year jail sentences. Putin said earlier this week that Russia's military presence in the Arctic was needed to protect against potential threats from the United States. The U.S. Geological Survey says the Arctic contains 30 percent of the world's undiscovered natural gas and 15 percent of oil. The world's largest oil producer, Russia expects to see oil output decline at its mainstay western Siberian oilfields in coming years and has looked further afield to potential Arctic reserves. Russia, Canada and Denmark all say an underwater mountain range known as the Lomonosov Ridge, which stretches 1,800 km (1,120 miles) across the pole under the Arctic Sea, is part of their own landmass

# 2NC EARTHQUAKES

## Increases in offshore drilling will cause earthquakes – Spain proves

**Shedlock 10/3** (Mike, 10/3/13, registered investment advisor representative for SitkaPacific Capital Management, "Spain Suffers from Hundreds of Earthquakes Caused by Offshore Drilling; Largest Quake is Magnitude 4.2; Citizens Complain of Cracks and Tremors Whipping Their Homes," http://globaleconomicanalysis.blogspot.com/2013/10/spain-suffers-from-hundreds-of.html)//RTF

An investigation is underway in Spain as to the cause of hundreds of recent earthquakes in the Cataluña region in Spain. The energy minister says "It appears that there is a relationship between gas injection and earthquakes". Via Mish-modified translation ... Jose Manuel Soria, the Minister of Industry, Energy and Tourism said that it appears that there is a direct relationship between the injection of gas into the underground Castor warehouse and earthquakes. The minister's remarks come after another night of earthquakes on underground warehouse environment. According to the National Geographic Institute, last night during 23 earthquakes have occurred. Two of them, at one in the morning and half an hour later, recorded a magnitude of 4.1 on the Richter scale. The other earthquakes were registered a magnitude of between 1.7 and 2.9 on the Richter scale, according to the sources. The most intense ground motion since records began these earthquakes related to the Castor project came in early Tuesday with a magnitude of 4.2. The Castor project, with an investment of 1,200 million euros, aims to harness an old oil well 1,750 meters below sea level to supply up to a third of the gas demand of the system for 50 days, but apparently, gas injection since September 13 has caused hundreds of earthquakes, most low intensity. Several experts geologists have claimed that many earthquakes are due to "induced seismicity" by the Castor project, caused by the injection of gas into the rock. However, there is no consensus about its risks and evolution. Citizens Complain of Cracks and Tremors Whipping Their Homes Via "as is" Google-translation, please consider "I spent half the night" The residents of the villages near the Castor underground gas storage, near which has registered a surge of earthquakes, tremors live with that uncertainty every night whipping their homes. "was sleeping and moved the closet door that I have just back, I got scared and woke up suddenly, it was very strange, I had never felt anything like it, "says Ricard Fuster, neighbor Alcanar (Tarragona) on the earthquake registered 4.1 degrees last night in the Gulf of Valencia. In the same terms is expressed Pietat Subirats, 47, sleeplessness trailing by earthquakes: "I've spent half the night. I woke with a start, in my house have noticed the two strongest earthquakes and trembled on my street all, "says this 47-year resident of Alcanar. "First I felt the movement of the bed, then started to shake and furniture throughout the house, the dogs would not stop barking area," he recalls. Pietat is outraged: "In my street were all awake by contacting us through social networks. We are angry because these episodes are becoming worrisome, asking politicians and responsibilities to the company. The inhabitants of the towns of the Ebro and Castellon collect sleeplessness and tremors stories. Earthquakes, in fact, dominate all neighborhood gatherings: "We are afraid, I have noticed the strongest earthquake that has been, then moved the structure of the house," says Emilio Valls, a real estate agent for 36 years who lives in a three-story building in Sant Martí Mayor Street, in the heart of Alcanar, a few meters from the Plaza Mayor. Blame Game is On Here is a rather curious "as is" Google-Translated headline: "The government did not heed the request of the Government to make a seismic report" Close scrutiny reveals that current government officials blame the previous administration (always a safe thing for politicians to do). The previous government was warned about the need to analyze the seismic consequences of project implementation Castor, gas marine store located at the Ebro Delta told him the Government before the license granted to initiate activities to Scales UGS, but the Ministry of Industry disregarded regional requests, as explained this morning the Minister for Territory, Santi Vila, who has confirmed this morning there was another earthquake of 4.2 on the Richter scale. Meanwhile, the president of the council of Castellón, Javier Molinero, has announced that the provincial corporation take legal action "against former ministers responsible for the processing and adjudication of granting Castor underground storage project in the event that there is evidence of negligence in the process carried out by the Government of Spain between 2008 and 2010. " Miller has aimed at Narbonne Cristina, Elena Espinosa, Miguel Sebastian and Joan Clos for their different responsibilities in the project. The Catalan Minister Santi Vila has held that "the issue is not to laugh, it's serious" after continuous earthquakes that have occurred in the last week, warning that from a intesidad of 4.5 may have direct effects in buildings, with the appearance of cracks. Hence, the Government has contacted the project manager, Escal UGS, to have the certainty that the activity has been stopped.

# 2NC NAVAL READINESS

## Gulf drilling undermines naval readiness – prevents effective training

**Weiss 2012** (Daniel, 10/13/12, Senior Fellow Center for American Progress, "The American Energy Initiative: A Focus on the Outlook for Achieving North American Energy Independence Within the Decade," http://www.americanprogressaction.org/issues/green/report/2012/09/13/37822/the-american-energy-initiative-a-focus-on-the-outlook-for-achieving-north-american-energy-independence-within-the-decade/)//RTF

There have been recent proposals to open areas off the Atlantic coast for oil and gas production. Such proposals, however, could impair national security because a large portion part of this area is critical for a wide array of military training, including explosives, submarine exercises and Navy SEAL training. The Department of Defense wants to prohibit offshore drilling in a vast majority of the 2.9 million acre zone under consideration for oil production off Virginia.65 About 20 percent, or 630,000 acres, would be open to drilling.66 Secretary of the Interior Ken Salazar reiterated that Defense Department needs will take precedence over the energy industry.67 Similarly, proposals to open the Gulf coast of Florida to expanded oil and gas production would also interfere with Department of Defense training. Tom Neubauer, president of the Bay Defense Alliance, raised concerns about conflict with the Navy during an April 2012 public hearing on the expansion of drilling. He warned: The Gulf test range, which is essentially everything east of the military mission line, which comes down from Pensacola into the Gulf of Mexico, is really essential to nine bases in Northwest Florida. Most of those bases do testing and training, research and development in the Gulf of Mexico. ... Drilling in those areas would impair those missions.68 One of the benefits of energy independence would be enhanced national security. It makes little sense to strive for that goal by drilling in places that would interfere with our security. **Drilling in these two places important to our military is even less sensible because "about 70 percent of undiscovered** oil and **gas resources are on federal lands that are available for leasing** under current laws and administrative policies" according to recent analysis by the Congressional Budget Office.

# 2NC HUMAN RIGHTS IMPACT

**Arctic drilling violates indigenous human rights- D-Rule**

**Cultural Survival 05** (Cultural Survival.org, 10/28/05, Native rights advocacy group, "Gwich'in Human Rights Threatened by ANWR Drilling," http://www.culturalsurvival.org/news/united-states/gwichin-human-rights-threatened-anwr-drilling)//RTF

The Gwich'in Steering Committee announced on October 25 the release of a new report outlining the implications of drilling in the Arctic National Wildlife Refuge (ANWR) as a violation of Gwich'in human rights under international law. A Moral Choice for the United States—The Human Rights Implications for the Gwich'in of Drilling in the Artic National Wildlife Refuge was prepared by the public interest law firm Trustees for Alaska, on behalf of and under the auspices of the Episcopal Church, the Gwich'in Nation, and Professor Richard J. Wilson, Director of the International Human Rights Law Clinic at American University. Oil drilling in the ANWR would jeopardize the culture of the Gwich'in, Legal Director of the Trustees for Alaska Rebecca Bernard said during a press conference about the report on the day of the report's release. She emphasized that the coastal plains of Alaska, the planned drilling site, are critical to the Porcupine Caribou Herd, essential to the Gwich'in way of life. Bernard said that the United States is obligated under several international bodies to protect the plains. The report cites the International Covenant on Civil and Political Rights, the Charter of the OAS, the Inter-American Commission on Human Rights, and the UN Human Rights Committee support the Gwich'in rights to culture, their own means of subsistence, health, and religion. On October 19, the US Senate Energy Committee voted 13-9 to open the land for oil drilling as part of the energy panel's ANWR drilling provision, which paved the way for subsequent passage of the bill through the House Resources and Senate Budget committee. The bill will now go before Congress in early November. Oil drilling has been rolled into the budget bill rather than being categorized as an energy bill because it will allegedly serve as a way to raise funds, lessen United States' dependence on international oil, and create jobs, according to the Washington Post. Language used in the budget bill has made it impossible for opponents to block the legislation with a filibuster. According to Reuters, the US government estimates that the ANWR has 10.4 billion barrels of crude oil that could ease the recent oil shortage. Professor Wilson said in the press conference that if the budget bill is passed, the Charter of Regulation from OAS will be violated. The Charter states that the government of each nation must "preserve and enrich the cultural heritage of the American peoples." Several land and human rights cases including the Yanomami Indians vs. Brazil, Lubicon Lake in Canada, the Maya of Toledo District v. Belize, the Western Shoshone of Nevada, the Awas Tingni community vs. Nicaragua, and most recently, the Yakye Xi of Paraguay set the precedent for the Gwich'in, according to Wilson. Luci Beach, a representative of the Gwich'in Steering Committee, said in the press conference that it is "unacceptable that another nation is allowed to be destroyed [for oil]." She stressed that the Gwich'in people still have a viable subsistence culture and use the land as part of their livelihood and live in villages on the caribou route. The Gwich'in believe that they have a responsibility to the Porcupine Caribou herd and it is their job to care for and protect them. The Gwich'in Nation's homeland spreads across northeastern Alaska and northwestern Canada, and includes the ANWR. Gwich'in have occupied this land for over 20,000 years and subsist primarily on hunting caribou. This land is sacred to the Gwich'in people who call it "the sacred place where life begins." The ANWR is not only the home of the Porcupine Caribou Herd that the Gwich'in people depend on, but is also an integral part of their social, economic, and cultural identities. The Gwich'in Nation is currently reviewing options they have for filling an international complaint. The Gwich'in Steering Committee is urging US citizens to immediately contact their Senators and Representatives asking them to vote against the budget bill that could open the Arctic Refuge to oil leasing and drilling. Cultural Survival helps Indigenous Peoples around the world defend their lands, languages, and cultures as they deal with issues like the one you've just read about.

# 1NC OIL SPILLS DA

**Arctic spills minor, but next one will be big – oil drilling causes it**

**O'Rourke, 6/15** Specialist in Naval Affairs (Ronald O'Rourke, "Changes in the Arctic: Background and Issues for Congress," 15 June 2012, http://www.fas.org/sgp/crs/misc/R41153.pdf)

Climate change impacts in the Arctic, particularly the decline of sea ice and retreating glaciers, have stimulated human activities in the region, many of which have the potential to create oil pollution. A primary concern is the threat of a large oil spill in the area. Although a major oil spill has not occurred in the Arctic region,82 recent economic activity, such as oil and gas exploration and tourism (cruise ships), increases the risk of oil pollution (and other kinds of pollution) in the Arctic. Significant spills in high northern latitudes (e.g., the 1989 Exxon Valdez spill in Alaska and spills in the North Sea) suggest that the "potential impacts of an Arctic spill are likely to be severe for Arctic species and ecosystems."83 A primary factor determining the risk of oil pollution in the Arctic is the level and type of human activity being conducted in the region. Although climate changes in the Arctic are expected to increase access to natural resources and shipping lanes, the region will continue to present logistical challenges that may hinder human activity in the region. For example (as discussed in another section of this report),84 the unpredictable ice conditions may discourage trans-Arctic shipping. If trans-Arctic shipping were to occur on a frequent basis, it would represent a considerable portion of the overall risk of oil pollution in the region. In recent decades, many of the world's largest oil spills have been from oil tankers, which can carry millions of gallons of oil.85 Although the level of trans-Arctic shipping is uncertain, many expect oil exploration and extraction activities to intensify in the region.86 Oil well blowouts from offshore oil extraction operations have been a source of major oil spills, eclipsing the largest tanker spills. The largest unintentional oil spill in recent history was from the 2010 Deepwater Horizon incident in the Gulf of Mexico.87 During that incident, the uncontrolled well released (over an 84-day period) approximately 200 million gallons of crude oil into the Gulf.88 The second-largest unintentional oil spill in recent history—the IXTOC I, estimated at 140 million gallons—was due to an oil well blowout in Mexican Gulf Coast waters in 1979.89

**A spill collapses Arctic biodiversity**

**National Academy of Engineering, '03** (National Academy of Engineering, 2003, "Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope," http://dels-old.nas.edu/dels/rpt_briefs/north_slope_final.pdf)

Alaska's North Slope is underlain by permafrost— a thick layer of earth material that stays frozen year round. The permafrost is covered by a thin active layer that thaws each summer and supports plant growth for a brief period. If permafrost thaws, the ground surface and the structures it supports will settle. To minimize disruption to the ground surface, the North Slope industrial infrastructure is specially built—pipelines are generally elevated rather than buried, and roads and industrial facilities are raised on thick gravel berms. For a variety of reasons, nearly all of the roads, pads, pipelines and other infrastructure ever built are still in place. The environmental effects of such structures on the landscape, water systems, vegetation, and animals are manifest not only at the "footprint" itself (physical area covered by the structure) but also at distances that vary depending on the environmental component being affected. The petroleum industry continues to introduce technological innovations to reduce its footprint, for example, directional drilling and the use of ice roads and pads, drilling platforms, and new kinds of vehicles. For some areas of concern, the committee found no evidence that effects have accumulated. For example, despite widespread concern regarding the damaging effects of frequent oil and saltwater spills on the tundra, most spills to date have been small and have had only local effects. Moreover, damaged areas have recovered before they have been disturbed again. **However, a large oil spill** in marine waters **would likely have substantial accumulating effects** on whales and other receptors because current cleanup methods can remove only a small fraction of spilled oil, especially under conditions of broken ice.

**And, that collapses global biodiversity**

**Arctic Council 11** (Arctic Council, 2 May 2011, "Arctic Biodiversity," http://www.arctic-council.org/index.php/en/biodiversity/124-arctic-biodiversity)

The Arctic contains many species not found elsewhere, and many habitats and ecological

processes and adaptations that are unique. These include the seasonal bursts of life on land and in the ocean, the ability of some plants to survive extreme cold and dryness, the physiological features that allow mammals to maintain body heat through an Arctic winter, and the presence of life within sea ice. Furthermore, some groups such as willows, sawflies, and sandpipers are found in greater diversity in the Arctic than anywhere else. In a global context, the Arctic is a significant component of the diversity of life on Earth.

**And, that causes extinction**

**Science Daily, '11** (ScienceDaily, 11 August 2012, "Biodivserity Key to Earth's Life-Support Functions in a Changing World," http://www.sciencedaily.com/releases/2011/08/110811084513.htm)

The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. **These so-called ecosystem services are what makes Earth inhabitable for humans.** They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles. Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services. In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes. In a study published in the current issue of the journal Nature, the research group investigated the extent to which the positive effects of diversity still apply under changing environmental conditions and when a multitude of processes are taken into account. They found that 84 percent of the 147 plant species included in the experiments promoted ecological processes in at least one case. The more years, locations, ecosystem processes, and scenarios of global change -- such as global warming or land use intensity -- the experiments took into account, the more plant species were necessary to guarantee the functioning of the ecosystems. Moreover, other species were always necessary to keep the ecosystem processes running under the different combinations of influencing factors. These findings indicate that much more biodiversity is necessary to keep ecosystems functioning in a world that is changing ever faster. The protection of diversity is thus a crucial factor in maintaining Earth's life-support functions.

# 2NC OIL SPILLS IMPACT

**Oil spills cause extinction**

**Dempsey 84** (Paul Stephen, Professor of Transportation Law and Director of the Transportation Law Program – University of Denver College of Law, "Compliance and Enforcement in International Law -- Oil Pollution of the Marine Environment by Ocean Vessels", Northwestern Journal of International Law & Business, Summer, 6 NW. J. INT'L L. & BUS. 459, Lexis)

In the short term, oil pollution on the high seas will have both aesthetic and economic consequences -- tourist and fishing industries will surely suffer. 7 The long term effects may be far more profound. First, [*463] hydrocarbons may build up on the food chain, creating possibilities of increased carcinogenic exposure. Second, diminished fishing harvests may impair the ability of man to feed himself. Third, the ultimate sterilization of the oceans may result in the **loss of much of the world's oxygen**, for the oceans are our major producers of that **essential prerequisite** to **life on earth**. Standing on a sandy beach looking into the vastness of our oceans, it is difficult to comprehend how man, relatively insignificant in comparison to the grandeur of the seas, could make an impact of any consequence on their waters. Breakers crash against the coast in a natural and innocent display of power that demands nothing from its living observers, yet commands their respect, as would a benevolent giant. The oceans' waves, currents, eddies, and swells give them life not in the biological sense, but in a physical sense. If poisoned, their currents will not cease to flow nor will its waves cease to curl. The oceans will quietly accept any abuse delivered, even if they ultimately become the cesspools of civilization. Birds may no longer dot the coastline in search of food, but the waters will still rise and fall as they always have. Fish may no longer be able to tolerate the polluted waters, but the tide will sweep softly inward and outward. Man may make his environment so adverse to life that he himself is destroyed, but the ocean, devoid of its biological brethren, will continue to exist, albeit alone. In contrast to the physical vitality of the oceans, biological existence is not immune to the effects of pollution. Certain environmental conditions must remain within reasonable boundaries in order to support life -- conditions that are altered when humans introduce oil into the marine environment. Millions of organisms, this and every year, will suffer and die an agonizing death as a result of the lethal and sublethal effects of oil pollution. And man himself may ultimately suffer the consequences of his indifference to the destruction of the environment. Oil finds its way into the oceans of the world in a variety of ways. The sources of pollution can be broadly classified into two basic categories: land based and marine based polluters. Land based pollution includes such unlikely sources as the small oil and gas slicks one sees in parking lots and on streets washed by rain into storm sewers, automobile emissions that return to earth in droplets of acid rain, and an estimated 3.5 million gallons per year of waste automobile crankcase oil. 8 Land [*464] sources are responsible for a significant percentage of ocean hydrocarbon pollution. Oil spills and wastes that occur on land eventually find their way into the rivers, which then carry the pollution into the sea. Table I sets forth the National Academy of Sciences estimates for 1973 of all sources of petroleum hydrocarbons entering the oceans. 9 TABLE I SOURCE MILLIONS OF TONS PER YEAR Marine transportation 2.133 Offshore oil production .08 Coastal oil refineries .2 Industrial waste .3 Municipal waste .3 Urban runoff .3 River runoff (including pollution from recreational boating) 1.6 Natural seeps .6 Atmospheric rainout .6 TOTAL 6.113 The above figures reveal that oil spills from tanker vessels are far from the only source of petroleum pollution of the oceans. Nevertheless, ships are responsible for a significant amount of pollution, the impact of which is felt throughout the marine environment. Two tanker disasters in the English Channel, the TORRY CANYON and the AMOCO CADIZ, mark an eleven year period during which sixty major tanker accidents spilled 1.6 million tons of oil into the sea. 10 In 1979 alone, over 750,000 tons of oil were lost in accidents, an increase of half a million tons over 1975. 11 Regrettably, tanker accidents frequently do not occur in the maritime deserts of the open sea, where harmful effects might be dissipated, but instead occur in valuable coastal areas. Between 1967 and 1978, eighty percent of all oil spilled by tankers was spilled within ten miles of shore. 12 Treacherous and heavily travelled sea lanes, such as the English [*465] Channel and the Cape of Good Hope, are particularly susceptible to oil spills. Despite the hazards, nearly 2500 tankers, laden with some 600 million tons of Middle East crude, round the Cape annually. 13 Of the estimated 200 million tons of oil pollution attributable to vessel sources each year, less than forty percent arises from the highly publicized oil spills. 14 Rather, the majority of ship source pollution is from "operational" activities, whereby petroleum is intentionally dumped into the oceans. Operational vessel source pollution includes two processes: de-ballasting and tank washing. De-ballasting involves the discharge of water placed into empty oil storage tanks to help maintain vessel stability. Oil residue inside the tanks (i.e., clingage) mixes with the water and is pumped out into the sea when the water is drained. The second operational source of pollution is tank washing, in which clingage is flushed out to sea as storage tanks are cleaned. Operational vessel source pollution is responsible for dumping between 1.5 to 2.5 million metric tons per year of oil into the oceans. 15 Accidents by tankers accounted for ten to fifteen percent of the two million tons of oil spilled into the oceans yearly between 1976 and 1979. As has been indicated, the major source of pollution is the deliberate pumping of oil into the sea by tankers; 16 sea water is used as ballast after delivery of oil and pumped back into the ocean. 17 While deliberate operational discharges of dirty ballast and fuel purification sludges are made by only a minority of oil tankers and other ships, they nevertheless account [*466] for ninety percent of all vessel-source pollution. 18 Since most flags of convenience ships are primarily responsible for transporting the world's oil, most pollution from both tanker accidents and intentional dumping can be attributed to these vessels. 19 Panama and Liberia are the most notorious for granting registration to foreign-owned vessels. 20 Once oil enters the ocean, it begins to mix with the sea water. The lighter components evaporate when exposed to the atmosphere. Oil that remains on the surface will be oxidized by sunlight and bacterial action. Oxidation is the natural process that breaks down the petroleum. Since this natural safeguard is aided by warm temperatures, oil spills in cold arctic climates may last as long as fifty years. 21 If the oil does not sink (by attaching itself to small particles in the water) or wash ashore, it will form tarry lumps. It is estimated that 87,000 tons of these tar balls are added to

the oceans each year. 22 Eighty percent of the Caribbean Sea, ninety percent of the Antilles, and vast areas of the Atlantic have been polluted in this manner. 23 A research vessel between Rhodes and the Azores found tar balls in seventy-five percent of the surface tows it made. 24 Scientists who were conducting a study in the Sargasso Sea, southwest of the United States, were forced to abandon their work because their nets became fowled with thick globs of tar. The African coast is heavily polluted by oil and tar, making it no exception to the rule that tarry lumps can be found on most beaches of the world. 25 Although large amounts of oil remain on the surface, much of it is mixed into the water column, either through wave action or the use of dispersants applied to oil slicks. Unfortunately, as the spill breaks up, the environmental hazard does not disappear; it increases. Dissolved oil and oil globules fall through the water column, growing more toxic as they approach bottom. Concentrations of dissolved oil from 0.2 to 1 part per billion, a harmful level already found in coastal waters near many cities, can skyrocket to as high as 250 parts per billion. 26 [*467] High levels of dissolved oil increase the concentration of toxic chemicals in commercial fish and severely disrupt the marine food chain. Oil pollution reduces the ocean's phytoplankton in coastal areas, where most of the world's commercial fish and oxygen are produced. Sea beds, an essential source of food for bottom dwelling commercial fish, become contaminated and sterile. The ramifications of introducing such high concentrations of petroleum pollution into the oceans are severe. Oil pollution disrupts phytoplankton, the microscopic plant life in the ocean that forms algae and serves an important function in the ecosystem. First, oil interferes with phytoplankton photosynthesis. Such interference may eventually reduce the oxygen output and the carbon dioxide uptake of ocean. Moreover, increased carbon dioxide in the atmosphere may cause a "greenhouse effect," such that heat will not be allowed to radiate into space, causing an increase in global temperatures. As a long term effect, the ice caps could eventually melt, causing the sea level to increase up to 200 feet, submerging most coastal cities. 27

# 2NC SPILLS TURN CASE

## Same response to another oil spill – ends the plan

**Pettit, '12** Director of the Southern California Air Program (David Pettit, Natural Resources Defense Council, 18 April 2012, "What if another BP Deepwater Horizon Disaster Happened Today?" http://switchboard.nrdc.org/blogs/dpettit/what_if_another_bp_deepwater_h.html)//CC

Unfortunately, after numerous investigations, Congressional hearings, and the finding of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (Oil Spill Commission) that the disaster's "root causes are systemic and, absent significant reform in both industry practices and government policies, **might well recur**," the stage is set for a repeat performance. If a similar disaster happened today, **there's no guarantee that we wouldn't get the same result:** oil covered beaches and wetlands, oil drenched birds and sea turtles, millions of gallons of toxic dispersants introduced into the environment and our food chain, a fishing industry struggling to survive, and a mass die off of dolphins. "Trust us," said the oil and gas industry before the BP disaster, "Our blowout preventers will work and we can clean up any spilled oil before it seriously impacts the environment." Today, the oil and gas industry continues to ask for our trust, even though the design flaw in the Cameron-style blowout preventers that was identified in the BOEMRE-commissioned technical report still exists, and even though the undersea containment systems that the industry and BOEM are relying on to cap a wild well quickly have not been tested at the depths and pressures of current and proposed deepwater wells. The Helix system has been tested on a tabletop in Houston, but the tabletop was not under water. On the government side, while the Department of Interior has embraced some significant reforms (for example, creating the Bureau of Safety and Environmental Enforcement to enforce safety and environmental regulations ostensibly immune from pressures to expand oil and gas production and maximize government revenues), the government agency charged with overseeing oil and gas activities in the Gulf of Mexico, the Bureau of Ocean Energy Management (BOEM), continues to make critical decisions on expanding oil and gas production in the Gulf of Mexico without site-specific analyses of the risks to the environment and human health.

# EXPORTS DA

# 1NC EXPORTS DA

**Supply is the controlling factor in approving US LNG exports- authorization only occurs domestic companies are cushioned**

Ebinger et al 5/02/ 12 (*Charles, a senior fellow and director of the Energy Security Initiative at the Brookings Institution AND **Kevin Massy, Assistant Director of the Energy Security Initiative at Brookings AND ***Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative at Brookings, May 2012, "Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas," Brookings Institute, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502_lng_exports_ebinger.pdf, JHR)

From the perspective of the U.S. federal government, the issue of implications is viewed in terms of "public interest." Under existing legislation, exports of natural gas to countries with a free trade agreement (FTA) with the United States are, by law, deemed to be in the public interest and authorization is required to be given without modification or delay. Projects looking for authorization to export LNG to countries without an FTA, which account for roughly 96 percent of current global LNG demand, are required to be approved by the Secretary of Energy unless, after public hearing, the Department of Energy finds that such exports are not in the public interest.80 Although the legal definition of "public interest" is not explicitly given in existing legislation, according to public statements by officials from the Department of Energy, "public interest" includes: ¶• Adequate domestic natural gas supply; • Domestic demand for natural gas proposed for export; • Economic impacts of exports (on GDP, consumers, and industry); • U.S. energy security; • Job creation; • U.S. balance of trade; • International considerations; • Environmental considerations; • Consistency with DoE's policy of promoting market competition through free negotiation of trade81¶The first two of these criteria were addressed in Part I. The remainder focus on the various domestic and international implications of U.S. LNG exports. ¶Domestic Implications ¶The domestic implications of U.S. LNG exports include their impact on natural gas prices, natural gas price volatility, jobs and competitiveness, and on overall energy security. ¶Price of domestic natural Gas¶The domestic price impact of natural gas exports will be a significant factor in determining whether or not the United States should export LNG. While it is generally acknowledged that a domestic price increase will result from largescale LNG exports, the size of the price increase is the subject of debate, with a number of studies suggesting a range of possible outcomes. The important considerations when analyzing the results and conclusions of the various existing studies are the assumptions and models that are used when making price forecasts. Below are the results and methodologies of five major pricing studies done by the EIA and three consultancies: Deloitte, ICF International, and Navigant Consulting, which published two studies.¶2012 Energy information Administration study ¶In January 2012, the EIA published a study entitled "Effect of Increased Natural Gas Exports on Domestic Energy Markets."82 The study, conducted at the request of the Office of Fossil Energy of the Department of Energy, analyzed four different export scenarios across four different resource base or economic assumptions to project price responses to LNG exports. In addition to a "baseline" scenario, where no LNG is exported, the EIA model considered four different export scenarios: ¶• A low export/slow growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A low export/rapid growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year; • A high export/slow growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A high export/rapid growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year. ¶Given the uncertainty over the actual size of the shale gas resource base and the future growth of the U.S. economy, each of these scenarios (both "baseline" and export) were

applied to four alternate background cases: ¶• A reference case, based on the EIA's 2011 Annual Energy Outlook; • A low-shale estimated ultimate recovery (EUR) case, in which shale gas production from new, undrilled wells is 50 percent below the reference case scenario; • A high-shale EUR case, in which shale gas production from new, undrilled wells is 50 percent higher than the reference case; • A high economic growth case, in which U.S. GDP grows at 3.2 percent as opposed to the 2.7 percent assumed in the reference case. ¶Given the range of assumptions, the range of results was unsurprisingly wide. The results range from a 9.6 percent increase (from $3.56 to $3.90/ mcf) in domestic natural gas prices in 2025 due to exports (in the case of high shale gas recovery, low export volumes and a slow rate of export growth) to a 32.5 percent increase (in the case of low shale gas recovery, high export volumes and a high rate of export growth). The percentage premium for domestic natural gas prices in 2025 for each scenario relative to the baseline scenario price estimate is detailed in table 3. ¶In addition to the price premium for exporting natural gas that exists in each case, the EIA study projected a short-term spike in natural gas prices as a result of LNG exports. As figure 7 below illustrates, in 2015, the first year that LNG exports occur, domestic natural gas prices rise rapidly until total export capacity is reached. In the "lowrapid" scenario prices peak in 2016, after the 6 bcf/day of export capacity is built over 2 years; in the "high-slow" scenario, natural gas prices peak in 2026, after the 12 bcf/day of export capacity is built over 12 years. The immediate jump in price becomes more pronounced in the scenarios where LNG export capacity increases quickly. In the "low-rapid" scenario, the price of natural gas peaks at nearly 18 percent above the baseline case; in the "high-rapid" scenario, natural gas prices peak at 36 percent above the baseline case.

# 2NC UNIQUENESS

**LNG exports are illegal – political reforms jolted by supply shifts are key to overcome**

**Slocum, 6/19/14** – joined Public Citizen's Energy Program in 2000 and is now the director. He appears regularly in radio, print, and television media, including guest appearances on The Colbert Report. Prior to Public Citizen, Tyson was a policy analyst at the Institute on Taxation and Economic Policy. He received his B.A. from the University of Texas at Austin. (Tyson, "LNG Exports are Illegal," CitizenVox.com, http://www.citizenvox.org/2014/06/19/lng-exports-are-illegal/)

As the White House, Congressional leadership and energy regulators at FERC are fast-tracking natural gas exports, they're forgetting one important fact: it's against the law. First, a little background. Less than a decade ago, natural gas prices were at record highs and folks like then-Federal Reserve Chair Alan Greenspan were saying that the US had to make it easier to permit Liquified Natural Gas (LNG) imports. Fast forward to today, where fracking has resulted in booming domestic natural gas production, fueling calls to make it easier to permit LNG exports. But fracking poses enormous risks to the environment, nullifying emissions benefits when it is burned as a fuel. We've raised these concerns about LNG exports in the past, but new research shows that exporting LNG is illegal.

In 1975, President Ford signed the Energy Policy & Conservation Act into law. In order to protect consumers, Section 103(b)(1) of the EPCA (S.622) directed the President of the United States "to promulgate a rule prohibiting the export of crude oil and natural gas produced in the United States, except that the President may…exempt from such prohibition such crude oil or natural gas exports which he [sic] determines to be consistent with the national interest." While the Department of Commerce promulgated rules banning crude oil exports, the agency never got around to writing rules banning natural gas exports. This oversight not only means that proposed LNG exports are most likely illegal, but that consumers are at risk. That's because of supply and demand: the more fracked natural gas we export, domestic supplies will get tighter, pushing up gas prices for households and businesses.

Public Citizen will ask the Department of Commerce to issue this long-dormant requirement to ban natural gas exports (stopgasexports.org)not just to protect consumers, but to discourage the additional fracking that would occur to meet expanded demand wrought by LNG exports.

**US LNG exports won't happen – developer reluctance**

**Wingfield, 3/7/14** – a reporter for Bloomberg News in Washington (Brian, "Years Needed for LNG Exports to Blunt Russia Energy Sales," Bloomberg, http://www.bloomberg.com/news/2014-03-07/years-needed-for-lng-exports-to-blunt-russia-energy-sales.html)

U.S. efforts to speed natural gas exports as a way to loosen Russia's grip on European energy supplies may be thwarted by lengthy reviews and developer reluctance to proceed with multibillion-dollar projects. Russia's military escalation in Ukraine is spurring calls in Congress for quick U.S. approval of plans to export liquefied natural gas from plants owned by companies including Cheniere Energy Inc. (LNG), Dominion Resources (D) Inc. and Sempra Energy. (SRE) Russia provides 30 percent of Europe's gas needs using pipelines that cross Ukraine. "I view this as an incredible opportunity for the United States to highlight its position as an energy superpower," Representative Cory Gardner, a Colorado Republican, said yesterday in a phone interview after introducing legislation to streamline the federal review of pending export projects. While the shale-gas boom has made the U.S. the world's largest natural gas producer, efforts to ship the fuel are bogged down by rules, financing needs and construction demands. Winning U.S. approval can take three years or longer, and not all companies planning a project

are committed to completing the work. Only one facility, Cheniere's $10 billion Sabine Pass terminal in Cameron Parish, Louisiana, has the required approvals from the Energy Department and U.S. Federal Energy Regulatory Commission. Shipments are scheduled to start in late 2015, according to the company. More Work Russia's OAO Gazprom (GAZP) today threatened to disrupt Ukraine's natural gas supply if it doesn't pay $1.89 billion owed to the company for recent shipments, according to a statement from Gazprom Chief Executive Officer Alexey Miller. Russia last cut off Ukraine's gas supplies in 2009 over a similar dispute. European Union Trade Commissioner Karel De Gucht said in an interview today that a Russian cut in supplies wouldn't be a major issue for the EU, in part because the 28-nation trading bloc has six weeks of strategic reserves. U.S. producers want the Obama administration to expedite the export process, though the terminals remain unbuilt. "We only have one approved license actually, and the molecules still aren't going to flow for a while," Energy Secretary Ernest Moniz told reporters March 5 at a conference in Houston. After the Cheniere license, the most optimistic view for the next set of LNG shipments to leave the U.S. isn't until 2017 or 2018, according to Moniz. "So, there's still quite a ways to go," he said. Canada, Mexico The U.S. is exporting some natural gas to Canada and Mexico, almost all by pipeline. Sending the product to Europe would require infrastructure that doesn't exist: plants to super-freeze the gas into a liquid suitable for transport on special tankers. The only U.S. plant for LNG, operated by ConocoPhillips (COP) in Alaska, has been shut since 2012. Lawmakers are exploring ways to help Ukraine and the European Union -- which depend on gas supplies from the east -- after Russia occupied Ukraine's Crimean peninsula and escalated months of political unrest. The House yesterday passed a bill to provide $1 billion in loan guarantees sought by President Barack Obama's administration to aid the former Soviet republic. The Senate hasn't yet acted. U.S. financial aid to may ultimately end up in Russia anyway if Ukraine needs to pay its eastern neighbor for natural gas, said Amit Khandelwal, a professor at Columbia University's Graduate School of Business in New York. 'Money's Fungible' "Money's fungible," he said in a phone interview. If the U.S. were to stipulate that aid couldn't be used to pay gas debts to Russia, Ukraine could free up money from another source, Khandelwal said. "It's just moving money around." Ukraine would need to receive natural gas from another source in order to prevent having to pay Russia for its gas supplies, he said. Advances in drilling techniques, including hydraulic fracturing, or fracking, have boosted U.S. production of the fuel by 35 percent from a decade-low 18 trillion cubic feet in 2005, according to the U.S. Energy Information Administration. Since the Energy Department approved Cheniere's application in May 2011, natural gas production has increased 8 percent. The glut has reduced U.S. energy prices, prompted a manufacturing boom and prompted some lawmakers to urge keeping supplies steady at home to support domestic jobs. Exporting to nations willing to pay more might cause U.S. prices to climb. Export Foe "We should not give away the domestic economic and national security rewards of our natural gas boom, and then just hope that the market reduces the risk of international conflicts," Senator Edward Markey, a Massachusetts Democrat, said yesterday in a statement. He offered a bill to require further Energy Department scrutiny of natural gas exports to determine if shipping abroad is in the national interest. The path to approval for gas-export projects is complex. Exporters need an Energy Department permit to ship the fuel to countries that don't have a free-trade agreement with the U.S. - - such as Japan and those in the EU. The FERC conducts a separate environmental and safety review. State regulators also weigh in. The FERC and Energy Department reviews can take one year and as long a two before a decision is made.

# LINK – ARCTIC

**Arctic natural gas development results in exports**

**Conley et al 13** (Heather, director and senior fellow of the Europe Program at CSIS, served as senior adviser to the Center for Europe and Policy Analysis, a public policy research institute dedicated to the study of Central Europe, July 2013 "Arctic Economies in the 21st Century The Benefits and Costs of Cold," Center for Strategic and International Studies, http://csis.org/files/publication/130710_Conley_ArcticEconomics_WEB.pdf, JHR)

As the Arctic region becomes increasingly accessible due to receding sea ice and technological advancements, multinational corporations view exploration of these untapped hydrocarbon resources as attractive commercial opportunities and long- term investments that would significantly boost their reserves. Developing these resources could bring significant economic benefits to the region and contribute to securing future U.S. energy supplies or export commodities, but concerns remain regarding infrastructure capabilities and environmental protection.

# LINK – ALASKA OCS

**Drilling in the OCS results in Alaskan exports**

**Sweet 11** (Cassandra, writer for The Wall Street Journal, 4/1/11, "Alaska Pushes to Expedite Offshore Drilling," The Wall Street Journal, http://online.wsj.com/news/articles/SB10001424052748703806304576236542341205266, JHR)

While Alaska has encouraged production on state lands and in state waters, for which it would earn production royalties, officials are also keen to see new offshore drilling in the Outer Continental Shelf, as Alaska collects fees from oil shipped through the Trans Alaska Pipeline.¶ Alaska's government has also encouraged development of a natural-gas pipeline that would ship gas from the North Slope to Canada and the Continental U.S. An alternative project would entail building a liquefied-natural-gas terminal that would export Alaska gas to overseas markets.

# LINK – SUPPLY

**More natural gas supply means lower prices- it's basic supply and demand**
**Thorning** 11/06/**13** (Margo, PH.D. Senior Vice President and Chief Economist American Council For Capital Formation, "LNG Exports: How Much Will They Impact U.S. Nautral Gas Prices," ACCF Center for Policy Research Special Report, http://accf.org/wp-content/uploads/2013/11/ACCF_LNG_Price_Impact_11.06.13_d3.pdf, JHR)

In most markets, price is determined by supply and demand and natural gas is no exception. Estimates of recoverable supplies of natural gas keep increasing, as shown in Figure 1. For example, in 2012, DOE's EIA forecast 2,203 trillion cubic feet and other credible estimates are much higher, reaching as much as 3,600 trillion cubic feet. Demand for natural gas is projected to rise from 66 Bcf/d in 2012 to 82 Bcf/d in 2018 according to recent projections by McGraw Hill's Bentek Energy.

**The plan's expansion of natural gas supply is key to exports**
**Davenport and Erlanger** 3/5/**14** (*Coral- climate and energy beat reporter for The New York Times AND **Steven, Harvard graduate, London bureau chief for The New York Times, "U.S. Hopes Boom in Natural Gas Can Curb Putin," The New York Times, http://www.nytimes.com/2014/03/06/world/europe/us-seeks-to-reduce-ukraines-reliance-on-russia-for-natural-gas.html?_r=0, JHR)

WASHINGTON — The crisis in Crimea is heralding the rise of a new era of American energy diplomacy, as the Obama administration tries to deploy the vast new supply of natural gas in the United States as a weapon to undercut the influence of the Russian president, Vladimir V. Putin, over Ukraine and Europe. The crisis has escalated a State Department initiative to use a new boom in American natural gas supplies as a lever against Russia, which supplies 60 percent of Ukraine's natural gas and has a history of cutting off the supply during conflicts. This week, Gazprom, Russia's state-run natural gas company, said it would no longer provide gas at a discount rate to Ukraine, a move reminiscent of more serious Russian cutoffs of natural gas to Ukraine and elsewhere in Europe in 2006, 2008 and 2009.¶ The administration's strategy is to move aggressively to deploy the advantages of its new resources to undercut Russian natural gas sales to Ukraine and Europe, weakening such moves by Mr. Putin in future years. Although Russia is still the world's biggest exporter of natural gas, the United States recently surpassed it to become the world's largest natural gas producer, largely because of breakthroughs in hydraulic fracturing technology, known as fracking.¶ "We're engaging from a different position because we're a much larger energy producer," said Jason Bordoff, a former senior director for energy and climate change on the White House's National Security Council.¶ Over the past week, Congressional Republicans have joined major oil and gas producers like ExxonMobil in urging the administration to speed up oil and natural gas exports. Although environmentalists, some Democrats and American manufacturing companies that depend on the competitive advantage of cheap domestic natural gas oppose the effort, they have fallen to the sidelines in the rush.¶ For Russia, energy supplies are as important to keeping a hold on Ukraine and the other former countries of the Soviet Union as is the Russian Army itself. Ukraine would freeze without Russian gas, and its flow has been a considerable source of wealth and corruption in both countries. But Russia is also obligated by contract to provide natural gas to Western Europe, and Moscow remains highly dependent on Ukrainian pipelines to get it there.¶ David Dalton, the editor of the Economist Intelligence Unit, said: "Russia has always used gas as an instrument of influence. The more you owe Gazprom, the more they think they can turn the screws."¶ But this time, there is a major difference. As recently as 2007, American natural gas supplies were believed to be dwindling, and the George W. Bush administration was considering importing natural gas from Russia. Since then, fracking, which environmentalists say could contaminate America's water supplies, has transformed the strategic landscape.

# LINK – OCS

**OCS drilling results in energy security and subsequently exports**

**Snow, 13** (Nick Snow, worked for The Oil Daily and former Washington correspondent and current full-time Washington editor for the Oil & Gas Journal, 6/7/13,"Witnesses describe benefits from expanding OCS activity", Oil and Gas Journal, http://www.ogj.com/articles/2013/06/witnesses-describe-benefits-from-expanding-ocs-activity.html, JHR)

Expanded oil and gas activity on the US Outer Continental Shelf would produce substantial economic and energy security benefits, three witnesses told a US House Natural Resources subcommittee. But a fourth witness said alternative energy and other offshore industries should also be allowed to grow. Most of the witnesses at the Energy and Minerals Subcommittee's June 6 hearing applauded the goals of HR 2231, which US Rep. Doc Hastings (R-Wash.), the full committee's chairman, introduced on June 4. The measure would expand federal offshore oil and gas leasing beyond areas that are part of the 2012-17 OCS program. "It would safely open up new areas that were previously under moratoria—such as the Mid-Atlantic, Southern Pacific, and Arctic," Hastings said in his opening statement. "This would create over a million new American jobs and generate hundreds of millions of dollars in new revenue to the federal treasury." John C. Felmy, American Petroleum Institute chief economist, testified, "If offshore energy production were extended to new areas, it could generate a bounty of job creation and new revenues to the government while improving America's energy security." He added, "Earlier this year, a single lease sale in the Gulf of Mexico generated $1.2 billion in revenue for the federal government. As wells are drilled and the leases begin to produce, the revenue impact will only grow, along with the prospects for employment in the region and around the country." Christopher Guith, vice-president for policy at the US Chamber of Commerce's Institute for 21st Century Energy, said in his written statement that HR 2231 is necessary because more than 86% of the US OCS is presently off-limits to oil and gas activity. Systematic increase "By increasing access to the OCS and establishing long-term production targets for the [US} Department of the Interior to plan around when formulating oil and gas leasing programs, the country can begin to systematically increase its energy security and reap the economic benefits that entails," Guith suggested in his written testimony.

# GAS K/T RUSSIA ECON

**Russian exports are the lynchpin of its economy**

Weitz 11 (Richard, senior fellow at the Hudson Institute and a World Politics Review senior editor, November 2011, “Can We Manage a Declining Russia?”, http://www.aei.org/files/2011/12/08/-can-we-manage-a-declining-russia_152701899417.pdf, JHR)

Europe is an unavoidable partner. The European market consumes 90% of Russia's total gas exports and 60% of its crude oil, which make up only 25 and 15% of Europe's total demand, respectively. Russia presently does not have any viable alternative markets remotely equal in size to Europe. Dependence is a two-Way phenomenon. "40% of Russian public money” comes from the sale of oil and gas to Europe, and at least 75% of Russian export revenues are linked to the EU's energy market in general. Without any extant alternative markets to exploit in the near-term, Moscow requires European gas revenues to preserve its own financial solubility. Energy overshadows other concerns. Paillard believes that while the energy trade has, in the past, been "part of a game of blackmail, lies and fear" between Europe and Russia, its new status as a "question of life or death for Russian revitalization" and its importance to Europe's economic growth mean that neither side can afford to use gas supplies as leverage in other international concerns. In Paillard's estimation, Brussels and Moscow both regard issues such as human rights or the Chechen conflict as not being worth risking the energy trade over. Therefore, Russian and the European Union are inextricably bound to one another by their mutual dependence on the energy trade. Russia cannot absorb the financial consequences of interrupting the EU revenue stream, while the European Union cannot do without Russian gas supplies. Europe has few alternative suppliers, and cannot develop alternative energy sources in the near term. Russia, meanwhile, is unlikely to be able to diversify its economy or target new markets any better than it has in the past.

# AT: RUSSIAN ECON RESILIENT

## Russia's economy isn't resilient

**Davies 3/30** (Gavyn, 3/30/14, macroeconomist who is now chairman of Fulcrum Asset Management and co-founder of Prisma Capital Partners, "President Putin's economic Achilles heel," http://blogs.ft.com/gavyndavies/2014/03/30/president-putins-economic-achilles-heel/)//RTF

The Ukraine crisis has been widely described as the most dangerous confrontation between Russia and the west since the end of the Cold War. Today's talks between US Secretary of State John Kerry and Russian Foreign Minister Sergei Lavrov offer hope that the crisis might be defused, with the US suggesting what seems like a joint US/Russian demilitarised "protectorate" in the Ukraine, in exchange for Russian withdrawal from the Crimea. We shall see whether that satisfies President Putin, whose recent rhetoric about Russia being "cornered for centuries" suggests that he might have much wider plans. So far, the global financial markets, outside Russia, have been almost completely unaffected by events in the Ukraine. Initially, there was some decline in the stock markets of European economies with significant trading and banking links with Russia, including Germany, but recently these losses have been reversed. The low probability of direct military confrontation between Russia and the west in the Ukraine is obviously key to this. Perhaps the markets also believe that the crisis will blow over without a major outbreak of tit-for-tat sanctions, beyond the limited restrictions on individuals which have been announced so far. Or perhaps they have concluded that, while the west can greatly damage the Russian economy, the same cannot happen in reverse. What has become obvious is that the Russian economy itself is very vulnerable indeed to a worsening in the crisis. The burgeoning capital outflow since the start of 2014 has, in effect, imposed a form of economic "sanctions" on the Russian economy, without the need for western governments to take much action of their own. Western leaders clearly believe that this could turn out to be President Putin's Achilles heel, though this reckons without the possibility that he will opt for riskier foreign adventures in an attempt to distract attention from economic weakness at home. The Russian economy has been in difficulty for several years. After the boom in the last decade, largely based on rocketing energy prices, economic growth has slowed sharply since 2010. (The IMF's latest medium term economic projections are summarised in the thumbnail graphic on the right.) The structural reforms needed to boost private sector growth outside the energy sector have been disappointing, and the exchange rate has been over-valued from the point of view of the manufacturing sector. Excluding oil revenues, the budget deficit has been running at around 10 per cent of GDP, so living standards have become heavily dependent on oil prices remaining above $100/barrel. In recent years, the rate of credit expansion to households has been explosive (over 30 per cent per annum), as it has in many other emerging economies. Whether the banking system could survive an economic downturn is an open question. There are some silver linings. Foreign exchange reserves are high, covering two-thirds of external debt, and the labour market has survived the slowdown in growth surprisingly well. Still, the economy appeared vulnerable to the effects of Fed tapering, even before the Ukraine crisis erupted. Since then, capital outflows, both by Russian citizens and by foreigners, have become serious, running at over $60 billion in 2014 Q1, according to Economy Minister Alexei Ulyukayev. These outflows may weaken the banking system, and withdraw funding for many of the capital investment projects that were critical to a recovery in GDP growth. The growth rate had already declined to only 1.3 per cent in 2013, compared to about 7-8 per cent in the miracle years of the last decade. The capital outflows have also forced the CBR to raise interest rates by 1.5 per cent, something which would otherwise have been unnecessary, given the broadly stable outlook for inflation. As a result of the crisis, the economy now stands on the brink of outright recession, the first in any of the BRIC economies since 2009. Last week, the World Bank published a frank assessment of the impact of the crisis on the economy, and the Economy Minister surprisingly said that he basically agreed with its conclusions, which are summarised here: The World Bank figures confirm that Russia's main vulnerability at present stems from the capital account of the balance of payments, working both through lower investment, and through weaker consumption, which had earlier seemed to be the main hope for economic expansion. Consumer sentiment has plummeted since the crisis started, despite the sharp increases in the President's personal political ratings. The World Bank suggests that, if the crisis continues, then private capital outflows would reach $133 billion this year, and real GDP would decline by 1.8 per cent. This would surely result in a sharp reversal of recent declines in the unemployment rate, currently at 5.2 per cent of the labour force. Of course, the Russian government will take steps to alleviate the problems caused by capital outflows. Deputy Prime Minister Igor Shuvalov said last week that there was an "action plan for the roughest scenario", even though he hoped not to have to use it. Russia certainly has some financial weapons it can deploy. Its foreign exchange reserves stand at $510 billion at the end of 2013, enough to replace all of the foreign exchange losses from capital outflows. Furthermore, the government's overall budget (including oil revenues) is close to balance, implying that it can afford to finance some fiscal easing, as long as oil prices do not fall. And many western companies, including Siemens for example, are obviously very reluctant to cut their historic ties with Russia if they can avoid it. Nevertheless, the outlook for the Russian economy in a condition of full or partial isolation from the major developed economies in Europe and America would be bleak. There would also be economic losses incurred in the west, since Russian gas could not quickly be replaced in many European economies, and bank exposures to Russian assets are not entirely negligible in Austria, Italy and France. But exports to Russia represent much less than 1 per cent of GDP in all of the major European economies, including Germany, which is the most exposed. Whether the global financial markets could turn a blind eye to this crisis if Russian troops enter the eastern Ukraine seems doubtful. But, in any likely eventuality, President Putin must know that the Russia would be the main economic loser.

## The Russian economy is on the brink of collapse- not resilient

**Aslund 4/22** (Anders, 4/22/14, the Moscow Times, "Russia Is in No Economic Shape to Fight a War," http://www.themoscowtimes.com/opinion/article/russia-is-in-no-economic-shape-to-fight-a-war/498728.html)//RTF

Last Friday evening, the Russian Security Council met. In attendance were 12 men — almost all of whom are around 60 years old and who once worked in the KGB in St. Petersburg — and one woman. Many have speculated that they might have agreed on a plan to invade eastern and southern Ukraine after Putin revived the term "Novorossia," or New Russia. None has significant economic insights. In the U.S., by contrast, the slightly larger National Security Council includes several economic officials, starting with the treasury secretary because the U.S. considers national security decisions economic issues as well. Not surprisingly, the Kremlin seems oblivious to Russia's economic weakness. In his marathon television show last week, Putin said: "There are certain apprehensions [from the West] with regard to Russia itself — its huge territory, potential growth and power. This is why they prefer to cut us to size and take us to pieces." But Russia has only a 2.9 percent share of global gross domestic product. This is only 6 percent of NATO's GDP. In 2012, Russia's defense expenditures corresponded to one-tenth of NATO's defense expenditures. A country so economically weak would be well advised not to challenge far wealthier and stronger neighbors. To make matters worse, Russia has few allies. In particular, Russia is likely to be highly vulnerable to financial sanctions. One month ago, the Western discussion on possible sanctions against Russia focused on whether they could be effective. During the spring meeting of the International Monetary Fund in Washington April 12 to 13, the question was turned around: Do we really want to destroy Russia that fast? The dominant theme was that geopolitical risk is back, and Russia is seen as the main risk. Official Russian reactions to the Western threat of sanctions have been that Russia's state corporations would invest in Russia and that Russia would establish its own payments system, making itself independent of the Western financial system. But none of this is realistic. In its March report on the Russian economy, the World Bank showed that the country's total foreign debt at the end of January was $732 billion. The distribution between public and private debt is only available from October last year. Then, state banks had $128 billion and nonfinancial state corporations $164 billion of foreign debt. Adding $80 billion of government foreign debt, Russia's total public foreign debt was $372 billion, while its international currency reserves are $477 billion, but much of those can be frozen as well. This makes Russia highly vulnerable to international financial sanctions. In an insightful article in Foreign Affairs magazine on April 10, Robert Kahn argued that "Russia's relationship to global financial markets — integrated, highly leveraged and opaque — creates vulnerability, which sanctions could exploit to produce a Russian 'Lehman moment': a sharp, rapid deleveraging with major consequences for Russia's ability to trade and invest." That could mean a "sudden stop" of international finance to Russia, which would have devastating consequences for its economy. State banks and other state-controlled corporations are not creditors to the West but big borrowers. Companies such as Rosneft have larger debts than their market capitalization, and their debts are held abroad. If they are not able to roll over their large foreign debts, they will be starved of capital. In recent weeks, the discussion in Washington has hardly been about whether to sanction Russian state banks but rather which ones and when is the best time to do it. Any significant bank that established itself in Crimea would be sanctioned. Gazprombank appears a prime target since its beneficiary owner, Bank Rossiya, is already sanctioned. In addition, it is relatively small and not that well connected with the rest of the financial system, so it could be used as a trial balloon. Ukraine's Prosecutor General's Office has just initiated a criminal case against Sberbank, and probably will for other Russian state banks, for "financing terrorists," which is considered an extremely serious crime in the U.S. Based on recent U.S. statements, it would be surprising if Washington does not sanction one or several Russian state banks this week. Moreover, Kahn writes, "The West can mete out some degree of financial punishment without even explicitly sanctioning Russian banks." This can be accomplished by simply tightening rules governing due diligence and money-laundering activities. Usually, sanctions are only effective if European countries apply the sanctions as well, but given the dominant role of the U.S. in the regulation of global finance, little can be done without the approval of U.S. authorities. Recently, U.S. law enforcement fined British bank HSBC $1.2 billion for having laundered drug money in Mexico. Putin's idea of a Russian payment system is a pipe dream. Who would accept Russian credit cards abroad? The big Russian state banks have already problems maintaining elementary correspondent relations because of their opacity. VTB Capital, for example, has complained about regulatory problems in London. To judge by growth forecasts, JP Morgan and Finnish BOFIT assess that sheer market volatility in March alone shaved off 2 percentage points from Russia's expected economic growth this year. In the first quarter, Russia's GDP contracted by half a percent. In March, the World Bank presented a "high-risk" scenario in which Russia's GDP would decline by 1.8 percent in 2014, capital flight may reach $133 billion, and investment may fall by one-tenth. At present, that looks like a low-risk scenario. The IMF and the Washington-based Institute of International Finance have recently produced much more pessimistic scenarios, which have not been published as yet. Both consider stress scenarios with a decline of Russia's GDP this year of about 4 percent, capital outflows in $150 billion to $180 billion and sharply falling exchange rates. Similarly, former Finance Minister Alexei Kudrin predicts a capital outflow of $160 billion this year. GDP could fall more because the risks are many, and they are nearly all on the downside. The impact of the Kremlin's aggression against Ukraine on the Russian economy will be powerful and multifaceted. The country's international currency reserves will fall, but probably not below $350 billion. The ruble exchange rate will plunge, while inflation and interest rates will rise, reducing investment and consumption. The main positive effects will come from the cheaper ruble that will boost exports and improve the current account as well as the budget balance. The central problem will be falling standard of living, which is vital for Putin's power. If Russia's National Security Council had invited one of the country's many good economists, it would probably have heard that Russia is in no shape to carry out an aggressive war in Ukraine.

## Russian economic resilience is a myth- it's structurally feeble

**Nuckols 3/24** (Mark, 3/24/14, teaches law and business in Moscow. He has a JD from Georgetown and an MBA from Dartmouth, "Russia's Feeble Economy," http://townhall.com/columnists/marknuckols/2014/03/24/russias-feeble-economy-n1813683/page/full)//RTF

Russia's imposition this week of its own "sanctions" against nine U.S. Senators and administration figures reveals its true weakness. Of course, being banned from visiting Russia is hardly a hardship at all, most people would not willingly want to visit that dreary country anyway. And Russia didn't even bother with "asset freezes," as no sane person would willingly risk their savings in any of Russia's financially struggling banks. But the Kremlin's laughable attempt to react to the limited sanctions Obama has imposed so far reveal both the depth of Moscow's fear and vulnerability. Russia's feeble economy is already facing severe strains, and real sanctions with bite could push it over a cliff. Russia enjoyed eight years of solid economic growth before the global financial crisis. But it was almost all based on rising energy prices, as Russia's economy is woefully dependent on oil and gas exports. Otherwise, Russia produces little that it can export for cash. Since the 2008 crisis, economic growth has been notably anemic – 1.3% for 2013, and analysts at VTB Bank are forecasting zero growth for 2014 and recession later in the year. And the Finance Ministry has calculated that Russia needs the oil price to remain above $100 in order to balance the budget. Russia's structurally feeble economy is further weakened by corruption, wasteful spending, and capital flight. And as oil futures prices indicate, the market is expecting lower prices going forward. And they could decline even more as new extraction technologies bring more oil and gas to market. Against this backdrop, the future already looked grim for Russia. Corruption and waste are heavy burdens on the state budget. And the Kremlin needs to indulge in increased social spending to maintain the loyalty of key constituencies, including government employees and pensioners. Russia does have substantial reserves it put away when oil prices were higher. But much of that money has already been squandered on large scale "prestige" projects. For example, Putin allocated over $50 billion to stage the Sochi Olympics. But now that the mascots have been put away, Sochi is a white elephant which will never recover any of the massive funds invested in Putin's games. And Crimea is going to put heavy new burdens on Russia's stretched finances. Russia is in a very precarious position, and despite the Kremlin's bravado, it is extremely vulnerable to the right sanctions. Putin's cronies may bravely mock the visa restrictions and asset freezes Obama has imposed to date – they don't have U.S. bank accounts and probably can live without visiting Disney World for the foreseeable future. But Obama has potentially powerful weapons in his sanctions arsenal. Iran is a case in point. Cutting off access to the world financial system has brought even the toughest mullahs to the negotiating table. And sanctions on Russia's energy exports could literally "make the economy scream." The ruble is already down almost 20% since last fall, and Russia's equity markets are in a freefall, even as global indices are reaching record highs. Putin's social compact has always been this – a plentiful trough for the bureaucrats to feed from, and rising incomes for the general population. This economic machine is already stalling, and well placed sanctions could deliver it a fatal blow. Russia's middle class may love Putin's apparent projection of strength, but his weakness is that they are not ready to endure economic hardship for his foreign adventures. Putin may have expected his "conquest" of Crimea to permanently cement his power, but his miscalculation may in fact lead to "Maidan" in Moscow if either the oligarchs or the populace turn on his system. The open question right now is whether President Obama will use sanctions with real bite merely to deter Putin from further intrusions on Ukrainian soil, or as a means to pry Crimea back out of Putin's paws.

## The Russian economy is vulnerable, not resilient

**Hennigan 3/3** (Michael, 3/3/14, Finfacts founder and editor, "Russia would be vulnerable to tough economic sanctions," http://www.finfacts.ie/irishfinancenews/article_1027308.shtml)//RTF

If the powers of the West have the backbone to respond to President Putin's military aggression in the Ukraine with tough economic sanctions, they would come at a fragile time for the Russian economy. It's not that the petrostate is going to run out of funds anytime soon but in 2013, Russian GDP (gross domestic product) rose only 1.3% in 2013 in a year when the US produced more oil than it imported for the first time since 1995 and is due to become the world's biggest producer in 2014. Oil and gas account for 70% of Russian exports and over 50% of all state revenue according to Nick Butler, a visiting professor and chair of the Kings Policy Institute at Kings College London. Economists estimate that Russia needs an oil price of about $117 to balance its budget. The Brent crude price has been in a range of about $110 in recent months. When the Soviet Union collapsed in 1991, the population of Russia was at 148.5m and it was 143m in 2010. Life expectancy at birth; male (years) in Russia was last measured at 63 in 2010, according to the World Bank. This compared with 78 in Ireland, 79 in the UK, 72 in Malaysia and 74 in China. The Organisation for Economic Co-operation and Development (OECD) said in a survey published last month that Russia made major strides in the decade before the 2008 crisis, helped significantly by oil and gas revenues. "But productivity and living standards are still well below those of the most advanced market-oriented countries, and the speed of convergence since the crisis was lower than in most BRIC (Brazil, Russia, India, China) countries. Moreover, growth has slowed since 2012, partly for cyclical factors but mainly because potential output growth has slowed. The Ministry of Economic Development slashed in November 2013 its projected long-term average growth to just 2.5% down from 4.3% projected in April, warning that Russian growth until 2030 would lag behind the global average. Making further sustainable advances and fulfilling the presidential decree of May 2012 to increase labour productivity by 50% by 2018 and create 25 million highly productive jobs by 2020 will require a new pace of reforms." The OECD added that while education enrolment rates are very high, insufficient quality and poor links with the business sector limit the supply of employable skills. Public spending on education is low and the high inequality of educational opportunities adds to the problem. Despite a long tradition of scientific excellence, Russia performs worse than most OECD countries in term of scientific output and patents, which is partly linked to the unfinished reform of the public R&D sector. Firms rarely see innovation as part of their business model. Innovation policies have recently become more focused at firms but results are not yet visible. Russia has a poor road network and the railway's share of freight transport (excluding energy pipelines) is almost 90% -- one of the highest rates in the world. The Federal Antimonopoly Agency (FAS) has called the public-owned Russian Railways, the country's biggest employer with a 1m payroll, as a "typical soviet monopoly." The minimum wage in Moscow is US$385 per month, Interfax reported last month

and the monthly average Russian salary was $780. Russia had foreign exchange reserves of $499bn at the end of January, down from $597bn in mid-2008. Public debt as a ratio of GDP is at 11%. Persistent capital outflows that amounted to $63bn in 2013, reflect poor investment opportunities in the country. The current account surplus has also shrunk in recent years because of a rapid growth in imports and the central bank recently forecast that the surplus, which was over 10% of GDP a decade ago, will disappear altogether by 2016.

## The Russian economy is on the brink- it can't take another hit

**Herszenhorn 4/16** (Daniel, 4/16/14, New York times, "Russia economy worsens even before sanctions hit," http://www.nytimes.com/2014/04/17/world/europe/russia-economy-worsens-even-before-sanctions-hit.html)//RTF

MOSCOW — Margarita R. Zobnina, a professor of marketing here, has been watching the Russian economy's gathering woes with mounting alarm: friends who have moved abroad with no plans to return; others who put off new business ventures because of rising uncertainty. Meanwhile, Ms. Zobnina and her husband, Alexander, also a professor, have rented a safe deposit box to hold foreign cash as a hedge against the declining ruble. Most shocking, she says, is that her local grocery is now selling anchovies packed in sunflower oil rather than olive oil, an obvious response to the soaring cost of imports. "That really freaks me out," she said. While the annexation of Crimea has rocketed President Vladimir V. Putin's approval rating to more than 80 percent, it has also contributed to a sobering downturn in Russia's economy, which was in trouble even before the West imposed sanctions. With inflation rising, growth stagnating, the ruble and stock market plunging, and billions in capital fleeing the country for safety, the economy is **teetering on the edge of recession**, as the country's minister of economic development acknowledged on Wednesday. Mr. Putin, who just lavished $50 billion on the Sochi Olympics, also must now absorb the costs of integrating Crimea, which economists and other experts say has its own sickly economy and expensive infrastructure needs. The economic costs have been masked by recent patriotic fervor but could soon haunt the Kremlin, as prices rise, wages stall and consumer confidence erodes. Even before the Crimean episode, and the resulting imposition of sanctions by the West, Russia's $2 trillion economy was suffering from stagflation, that toxic mix of stagnant growth and high inflation typically accompanied by a spike in unemployment. In Russia, joblessness remains low, but only because years of population decline have produced a shrunken, inadequate labor force. In recent weeks, international and Russian banks have slashed their growth projections for 2014, with the World Bank saying the economy could shrink by 1.8 percent if the West imposes more sanctions over Ukraine. By some accounts, more than $70 billion in capital has fled the country so far this year and the main stock market index fell by 10 percent in March — and a dizzying 3 percent just on Tuesday over fears of greater Russian involvement in Ukraine. "This is our fee of sorts for conducting an independent foreign policy," Aleksei L. Kudrin, a former Russian finance minister, said at a recent investor conference in Moscow. He added that the sanctions and the fallout from Mr. Putin's foreign policy moves would drain hundreds of billions of dollars from the national economy and strangle growth for the remainder of the year. But Mr. Kudrin, who quit his post in a dispute over the Kremlin's economic policies, said the population had yet to confront the full bill, which he predicted would grow as a result of the steep costs of absorbing Crimea, a geographically isolated peninsula. "Society has not yet seen the final result, and that will be when this puts the brakes on real incomes," he said. "For now, society accepts this fee." From a textbook perspective, the deep-rooted ills in Russia's economy have been clear for years: The decade-long skyrocketing in energy prices that buoyed Mr. Putin's popularity has flatlined, exposing the country's dangerous over-reliance on revenues from oil and natural gas. Efforts to diversify into manufacturing, high technology and other sectors have failed, and officials have been unable, or unwilling, to stop the rampant, corrosive corruption that scares off foreign investors. Consumer demand, which had been a primary driver of the Russian economy in recent years, stalled hard in 2013. Surveys by the Levada Center, Russia's only independent polling institute, show that consumer sentiment has been on a slow, steady decline since 2010, while fears of inflation — especially rising prices for basic necessities, which have persisted since the 1990s — have grown along with new anxiety about a potential drop in wages or rising unemployment. "If you want to open your eyes, you would admit that it is a slow, downward trend of social optimism and consumer optimism," said Marina Krasilnikova, who leads income and consumer research for the Levada Center. "The situation with Ukraine and Crimea has resulted in patriotic and imperialistic optimism," Ms. Krasilnikova said. But, she added, "this optimism will not last long." Some analysts said that Russia's annexation of Crimea had proved that Mr. Putin puts politics ahead of reasonable economic decisions, and that there was little reason for economic optimism, particularly given his inward, xenophobic turn, including his vow to create Russia's own cashless pay systems and even its own credit rating agency so it would not have to rely on the global financial system. Miljenko Horvat, a private equity investor who ran Citibank's office in Russia in the 1990s, said that Russia had simply failed to make itself economically relevant beyond its energy supplies. Mr. Horvat, who now lives in Vancouver, British Columbia, said that he often challenged his Russian friends by making the following point: "I wake up in the morning and drink coffee from a machine made by a Swiss company, Nescafé. I wear something that was designed in France or Italy but probably made in Turkey. I get into a German car, look at a Korean phone, use a computer that was designed in California but made in Japan or Korea. Russia just doesn't touch me in my daily life. It just doesn't matter. It's just not relevant. So where is the economic engine going to come from?" Mr. Horvat said that he had lived in Russia through defaults in 1991, 1993 and 1998 and that he expected another one. "I am not long in Russia," he said, invoking the financial term for betting on a rising stock, "neither in my portfolio, nor in life." Given the recent turmoil, a catastrophe has been averted so far largely because the price of oil has remained stubbornly high, at nearly $110 per barrel of Brent crude on Wednesday, even as production steadily rises in the United States. For now, that has kept the federal budget in decent shape with still no deficit projected for the year. But even without a shock, it is not clear how Russia will manage to climb out of the current quagmire. Stagflation is

among the most confounding economic problems that policy makers can face, and officials here seem flummoxed, with the Central Bank, Finance Ministry and Economics Ministry urging contradictory steps. Last month, the bank raised its key interest rate to 7 percent from 5.5 percent to combat inflation and support the ruble, a step that could slow growth. Meanwhile, the Economics Ministry, worried about growth, favors borrowing and government spending as a stimulus and to reduce capital flight, a possibly inflationary strategy that is opposed by the Finance Ministry, which wants to keep debt low and reserve funds available to weather any unexpected drop in oil prices. "All of them have their clear priorities, and they stick to their priorities," said Alexei Deviatov, the chief economist for Uralsib Capital, an investment bank here, "and there is very little coordination between these authorities." While Russian and global investors and businesses have been moving billions of dollars out of Russia to places perceived as less risky, it is not just money that is fleeing. Ms. Zobnina, who teaches at the Higher School of Economics in Moscow, said that one of her classmates had left for the United States after college 10 years ago, and that another friend followed three years ago to pursue a Ph.D., with no plans to return. Still another friend, a journalist, moved to London last summer with her husband and three children. Ms. Zobnina, 32, said that she and her husband, 30, were thinking about finding posts in Europe or the United States, and for now were keeping their savings in dollars and euros. In an interview, she conceded that putting cash in a safe deposit box hardly amounted to sophisticated financial planning, particularly for two economics professors. "It's absolutely not rational to prefer safe box than deposit because you lose interest," she said. "But in this unpredictable situation, when the ruble is falling and banks are unstable — and who knows when we'll be cut off from the global financial system or which bank will be next to be closed — it's better to have this small bird in hand."

## There is no resilience- Russia's economy is teetering

**Tanas and Andrianova 3/19** (Olga and Anna, 3/19/14, Bloomberg news, "Russian Economy Teetering," http://www.vnews.com/news/nation/world/11209223-95/russian-economy-teetering)//RTF

Moscow — Russia's economy is showing signs of a crisis, the government in Moscow said as the U.S. and the European Union announced sanctions over its plan to annex the Crimea region from Ukraine. "The situation in the economy bears clear signs of a crisis," Deputy Economy Minister Sergei Belyakov said in Moscow Monday. The cabinet needs to refrain from raising the fiscal burden on companies, which would be the "wrong approach," he said. "Taking money from companies and asking them afterward to modernize production is illogical and strange." Even before the standoff with the West, the worst since the Cold War, Russia's economy was facing the weakest growth since a 2009 recession as consumer demand failed to make up for sagging investment. President Vladimir Putin signed a treaty Tuesday on Crimea joining Russia, signaling his defiance of Western sanctions. Russia won't seek to further split Ukraine, he said in the Kremlin. The Ukrainian crisis is putting a strain on Russia's $2 trillion economy, which expanded 1.3 percent in 2013 after 3.4 percent the previous year. Last year's growth was "insufficient" and the current outlook and government forecasts "can't satisfy us," Putin said March 12. Russia will probably dip into a recession in the second and third quarters of this year as "domestic demand is set to halt on the uncertainty shock and tighter financial conditions," Vladimir Kolychev and Daria Isakova, economists at Moscow-based VTB Capital, said in a research note Monday. They cut their 2014 estimate to zero growth from 1.3 percent. The ruble has weakened about 9.6 percent against the dollar this year, more than any of the 175 currencies tracked by Bloomberg except the Argentine peso, the Kazakh tenge, the Ukrainian hryvnia, Zambia's kwacha and Kyrgyzstan som. It traded at 36.3190 as of 6:10 p.m. in Moscow, strengthening from 36.4860 at 3 p.m., before Putin's speech. EU foreign ministers Monday agreed to freeze assets and impose visa travel bans on 21 Russian, Crimean and former Ukrainian officials, while U.S. President Obama imposed sanctions on seven Russians. "Further provocations will achieve nothing, except to further isolate Russia and diminish its place in the world," Obama said Monday at the White House. The U.S. can "calibrate our response" based on whether Russia chooses "to escalate or to de-escalate the situation." Crimea's referendum, when the Black Sea peninsula voted March 16 to join Russia, was legal and in accordance with international laws, Putin said Tuesday. "Crimea is our historic legacy," Putin told lawmakers, regional governors and government officials in Moscow. "It should be part of a strong and stable sovereignty, which today can only be Russian." Addressing Ukrainians, Putin said: "Don't believe those who scare you with Russia, who yell that Crimea will be followed by other regions. We don't want to split up Ukraine, we don't need that." The region's accession to Russia would cost "dozens of billions of rubles" annually, Labor Minister Maxim Topilin told Bloomberg before Putin's address. A billion rubles is $27.6 million. The direct cost of annexing Crimea will be at least $3 billion for the Russian budget, according to Vladimir Osakovskiy, chief economist for Russia and the Commonwealth of Independent States at Bank of America Corp. in Moscow. That amount includes $2 billion to replace funds from Ukraine's budget and raise wages and pensions to the Russian level, as well as $1.5 billion to $2 billion for infrastructure upgrades, Osakovskiy said in an e-mailed response to questions. Russia already plans to spend at least 50 billion rubles ($1.4 billion) to build a bridge across the strait of Kerch to connect the peninsula to its mainland, Transport Minister Maxim Sokolov told reporters March 5. The ruble's slide, exacerbated by the intensifying tensions over Ukraine and the threat of sanctions, forced the central bank to look past sluggish growth and tighten monetary policy. Bank Rossii lifted its benchmark interest rate to 7 percent from 5.5 percent at an emergency meeting March 3. Policy makers held borrowing costs at their regular meeting on March 14 and said the benchmark rate wouldn't be cut in the next several months. Consumer-price growth accelerated to 6.2 percent in February from a year earlier from 6.1 percent in January. Bank Rossii wants to keep inflation within 5 percent this year after missing its target range of 5 percent to 6 percent in 2013. While Putin at a March 12 meeting with senior officials in Sochi called the economy "stable," a range of economists cut forecasts for this year. Morgan Stanley economists Jacob Nell and Alina Slyusarchuk lowered their estimate for 2014 growth to 0.8 percent from 2.5 percent, according to a note to clients Monday. "We see Russia close to recession in the first half of 2014 as a result of the Ukrainian security crisis driving higher rates and risk premia, leading to weaker consumption and contracting investment," they wrote. Monetary tightening will make borrowing more expensive and difficult for businesses and consumers, possibly leading to recession this year, Vladimir Miklashevsky, an economist at Danske Bank in Helsinki, wrote in a note clients. Even a forecast of 1 percent growth this year is optimistic given the geopolitical environment, he said, cutting his estimate to that level from 2.6 percent on March 14. Capital outflow from Russia may reach $70 billion in the first quarter and

there is “a real risk that this could push Russia into recession,” London-based Capital Economics said in a report published Monday. The sum may have reached $35 billion in January and February, Russian Economy Minister Alexei Ulyukayev told reporters Tuesday in Moscow. That’s more than half of the $63 billion for all of 2013. One way of helping accelerate growth would be to lower costs for companies, Belyakov said Monday. The total tax burden in the economy slightly fell to 33.3 percent of gross domestic product last year, Deputy Finance Minister Sergei Shatalov said at the same conference. “From the business point of view, the fiscal burden, I think, is extremely high today for both the economy and companies,” Belyakov said.

## The Russian economy can’t take any more- on the brink of recession- the economy isn’t growing

**Sharma 3/23** (Rushir, 3/23/14, Wall Street Journal, “Putin's Potemkin Economy,” https://mail.google.com/mail/u/0/#inbox)//RTF

Vladimir Putin had been named the "world's most powerful person" last year by Forbes magazine well before he annexed Crimea. The land grab added to the string of geopolitical victories credited to the Russian leader—including his rescue of Syria's Bashar Assad in the chemical-weapons standoff and the safe harbor he gave to the American secrets-spiller Edward Snowden. But Mr. Putin's real power base, the economy, is crumbling. Russia's economic growth rate has plummeted from the 7% average annual pace of the last decade to 1.3% last year. Now the brokerage arm of the country's largest state bank, Sberbank, SBER.MZ -0.36% expects **zero growth in 2014**. Sensing trouble, wealthy Russians have been moving money out of the country at one of the fastest rates in two decades—$60 billion a year since 2012—and now foreign investors are pulling out too. The ruble has fallen by 22% against the U.S. dollar since 2011, and the Central Bank of the Russian Federation has been fighting to prevent a ruble collapse since the Crimean crisis began. The situation is especially revealing because oil—the mainstay of the Russian state—has stayed relatively stable, hovering at $110 per barrel for three years. Yet the Russian economy is stagnating. This suggests deep-seated problems. Enlarge Image A Gazprom gas station near the headquarters of Gazprom in Moscow. Bloomberg News After Mr. Putin became president in 2000, he began working to end the political turmoil and inflation that gripped Russia under Boris Yeltsin. He managed the economy responsibly, getting control of the government budget and retiring debts. Rising global oil prices and easy money did the rest. Between 2000 and 2010, growth and per capita income rose to $10,000 from $1,500. Mr. Putin started this decade with an approval rating of 70%. But he grew complacent and cocky. Former KGB allies replaced economic reformers in his inner circle. As former President George W. Bush told me in an interview, Mr. Putin in private conversations morphed from a leader who worried about Russia's debt to one who by 2008 taunted the U.S. for having too much debt. He went from saving oil profits in a rainy-day fund to spending them to cement his power. Before 2008, Russia was putting back to work the oil fields, factories and labor force that were idled by the collapse of the Soviet Union. Even so, Mr. Putin built little that was new. While Russia has a relatively high rate of investment, 26% of GDP, much of the money gets funneled into dubious projects by the state. Now the spare capacity is shrinking, and the old Soviet roads and railways are deteriorating, as any regular visitors to Russia can attest. The inflation rate now stands at 6.3%, fourth highest among the major emerging markets, and well above the emerging world average of 3.8%. Russia has become a classic weak-investment, high-inflation economy. Despite his growing reputation as a geostrategic mastermind, Mr. Putin's economic strategy is increasingly self-defeating, focused on extending Kremlin control. While countries like Mexico are moving to open up the state oil industry, Russia is closing it off, tossing out foreign partners. Rosneft, the large state oil company, is buying out private companies and now controls 40% of the country's oil production. It is launching its own oil field-services company, bringing in-house a service that multinational oil companies have been hiring out to efficient private contractors for years. Russia grew richer during the last decade but did not develop in the normal sense of building up more sophisticated manufacturing industries. In a vibrant developing economy such as Korea or the Czech Republic, manufacturing accounts for at least 20% of GDP. Manufacturing in Russia accounts for just 15% of GDP, down from 18% in 2005. Small and medium-size companies of any kind, including banks, struggle to gain a foothold alongside state behemoths. The result is that the Russian state has few new sources of income outside of oil and gas, at a time when it is taking on more dependents. Demographics are putting a squeeze on public finances, as roughly a million Russians are retiring each year, and too few young people are replacing them in a workforce of about 100 million. The situation leaves fewer taxpayers to fund pensions, after a five-year period in which the Kremlin raised pension payouts by an average of 25% a year. This is a medium-term threat to the federal budget, which is in surplus now but shows a dangerous deficit if oil revenues—$222 billion or around 10% of GDP last year, according to IMF figures—are left out of the equation. Because of slowing growth and deteriorating terms of trade, the non-oil government deficit is now 11% of GDP. The current account is in a similar position: an apparent surplus, dependent on oil. The non-oil current-account deficit is currently running at a whopping 10% of GDP. To keep its federal budget in balance, Russia requires an oil price of $110 barrel, so it is tiptoeing on the edge. Yet because other commodity prices have fallen, the price of oil, now $107 per barrel, is at a 30-year high compared with industrial metals. This suggests that oil, too, may be poised for a downshift—which would have a crippling impact on the Russian economy. For now Russians are applauding their president's confident portrayal of the great power player. But that may change if the economy keeps deteriorating. Remember that by late 2011, as the scale of Russia's slowdown was becoming clear, Mr. Putin's approval ratings tanked and he faced protests in Moscow. Mr. Putin's approval rating has bounced back following the Sochi Olympics and the invasion of Crimea. But the rest of the world should not be fooled. The world's "most powerful man" is scoring his geopolitical victories from an increasingly vulnerable economic position.

## Russian growth is fragile

**Hanson 3/10** (Philip, 3/10/14, associate fellow in the Russia and Eurasia programme at Chatham House, “Forget sanctions: Putin has already traumatised fragile Russia,” http://www.cityam.com/article/1394470341/forget-sanctions-putin-has-already-traumatised-fragile-russia)//RTF

AT FIRST sight, Vladimir Putin’s assertion of Russia’s power and influence in Crimea has been a neat operation with low costs.

Moscow's aggression can even look like a nice little earner. While the EU, US and IMF offer aid to Ukraine, Russia gets to keep the undisbursed $12bn (£7.2bn) of its $15bn soft loan to Kiev, and Gazprom will put the price it charges Ukraine for gas back up from $268.50 per thousand cubic metres to $368.50. But this isn't the whole story – there have already been significant costs. Russia's economy was in a fragile state to begin with, and this new political uncertainty has alarmed investors, both domestic and foreign. Russia's economic ties to Ukraine are modest but not trivial; they do not benefit from the present situation. And then there is the matter of economic relations with the West: sanctions may indeed prove to be less than savage but, for the time being, nobody knows that for sure. For the Russian economy, before the events in Ukraine, 2014 was not looking good. GDP only rose by 1.3 per cent last year; investment and net exports fell; consumption growth – the main driver – eased. January showed further deterioration. In February, surveys showed business confidence declining. Growth is constrained on the supply side: labour inputs are declining, capital inputs are growing only slowly, and most transport and other infrastructure is over-stretched. For demographic reasons, workforce numbers are down (by 0.8 per cent year-on-year in January). Unemployment is historically low (5.6 per cent). Capacity utilisation outside the metals sector is high. The continuing net private capital outflow tells its own story. Financial stimulus, therefore, would only exacerbate inflation (6.2 per cent year-on-year in February). A month ago, there was a chance that growth, albeit very slow, would continue, even though many analysts reckoned there was nowhere for the economy to go but sideways or down. The intervention in Ukraine, starting on 27 February, narrows the options: "down" looks more likely. And it looks likely regardless of whatever sanctions the West comes up with. The last thing Russian business and potential foreign investors needed was a leap in political uncertainty. Both the rouble exchange rate against the US dollar and the MICEX (Moscow) stock market index are about 11 per cent down from the start of the year, with a good part of those declines coming since Moscow made its move in Crimea. The Russian central bank had spent $12bn defending the rouble this year up to 25 February. On 4 March alone it spent $11bn. Alfa Bank has changed its end-year exchange rate forecast from 36 roubles to the dollar to 38. Business confidence, already shaky, is now traumatised. A Gaidar Institute "express survey" late last week found 46 per cent of industrial respondents saying they expected output to fall because of the events in Ukraine; 50 per cent considered those events unlikely to affect their business either way; 4 per cent expected to benefit. Business relations with Ukraine itself are, so far as official figures show, only a small part of the problem. Less than 5 per cent of Russia's merchandise trade is with Ukraine, and flows of Russian direct investment into the country have lately been only about 1 per cent of total Russian outward foreign direct investment. However, many Russian firms have subsidiaries in Ukraine. The list includes the metals firms Evraz, Mechel and Rusal, as well as Rosneft, Alfa Bank and the telecoms companies Vimpelcom and MTS. Those subsidiaries will probably survive the confrontation between the two states, but head offices in Moscow will not have been amused by the latest developments. Moreover, the estimated cost of an annexed Crimea to the Russian budget is around $3bn a year. Sanctions imposed by the US and Europe could add to the costs for the Russian economy. Visa bans for high officials and a curtailment of interbank funding for Russian state banks would be a start. These costs would fall on Western businesses as well as on Russia, and that limits their credibility, especially as threats from Europe. It is in Europe, after all, that half of Russian trade is conducted and most of the Russian elite's foreign assets are held. But the point to be made is that, even if Western sanctions prove to be unconvincing, Putin's Ukrainian adventure will damage the Russian economy anyway. The bad news for the West, however, is that, as long as Putin can come out of this looking like a political winner, he and his close allies are unlikely to be deterred. Their record in evading fundamental economic reform tells us that, for them, politics always trumps economics.

## The Russian economy isn't resilient- it has a weak base

**Shipman 3/25** (Alan, 3/25/14, lecturer in economics at the Open University, "Crimea exposes Russia's neglected economic base," http://theconversation.com/crimea-exposes-russias-neglected-economic-base-24753)//RTF

No amount of international sanctions will reverse Russia's takeover of Crimea. But unless Vladimir Putin can now extend his influence over eastern Ukraine, the incomplete triumph could undermine him. If expansion stops now, Putin will have stretched the supply lines to a vital Black Sea naval base that Russia already controlled. He'll also have tipped the electoral balance in the rest of Ukraine towards the pro-European west. Future elections in a Crimea-free Ukraine, if democratic, are much less likely to return pro-Russian presidents like the ousted Viktor Yanukovich. Expert opinion seems fairly clear that that the wider "West" can do little, even if Putin – to avoid Pyrrhic victory – now seeks to "protect" the Russian-majority areas in eastern Ukraine. Interim government representatives say a further land-grab is imminent, while most external commentators say Russia will stop short of it. Even if Crimea-style "pro-Russian militia" seize power elsewhere, there's a consensus that western Europe can only wring its hands, because they carry no big stick. Although EU governments worry intensely about the rule of law being overthrown on their eastern border, they worry more about the loss of gas, oil and strategic mineral supplies that Russia controls, and investments their multinationals have already made there. International-relations "realists" say the EU can't bear the cost of meaningful sanctions, especially when nursing a fragile recovery from long recession. Nor can NATO contemplate military intervention, after decade-long actions in Afghanistan and Iraq whose dubious legal basis makes it anyway harder to condemn Putin's deeds. So "punishment" will mean forcing a few oligarchs to holiday on the Black Sea instead of the Riviera. Russia will laugh off the "isolation", and savour its latest success in regaining the "near abroad". Revanchism trips on the resource curse But this implicit acceptance of Russia's move, echoed in the critical Anglophone as well as the tame Russophone media, seriously understates both the extent and the effectiveness of the EU's likely response. It's true that heavy reliance on Russia as an energy supplier and major export market limits scope for a serious trade embargo in the short term. But the strongest calls for reaction against Russia have come from the Baltic states, which have the strongest economic ties to Russia and disaffected Russian minorities. For these governments, isolating Russia is the long game, and Crimea provides the ideal pretext. The Baltics have already redirected most of their exports to the EU, and are fast reducing their dependence on Russia for energy. They'd also like more reasons to close the door on giant Russian companies that threaten to buy up strategic assets. But the Baltics only carry so much clout within the EU. More decisively, weakening trade and investment links with Russia is consistent with the larger countries' structural change plans – especially Germany's drive to

substitute Gazprom's gas with renewables and clean coal. That couldn't be done immediately without drawing on the US's strategic oil stocks and emerging gas surplus, but this is something the Congressional leadership is already open to. Russia's threat to retaliate by shutting the gas taps is weakened by subsiding demand as the weather warms, alternative pipelines, and Gazprom's chronic cashflow weakness which means it can't halt flows for long without somewhere else to send them. Realists warn that isolating Russia for any appreciable time will encourage it to strengthen ties with large non-Western energy producers and consumers including China, widening its influence and so backfiring against the EU. But this overlooks long unresolved Russia-China tensions, and inequalities in the partnership that would disadvantage Moscow. These arise from its snail-paced post-Soviet modernisation, which means China can now engage with Putin's Russia as it does with Africa – as a supplier of superior technology and organisation in return for cheap natural resources. Russia grew like a "BRIC" in Putin's first decade, giving the impression of lasting strength. But economic policies shaped for natural-resource oligarchs are now shackling its economy. It shrank when world oil prices fell in 2009, and was already stalling again before the self-created shocks on its border. It will feel the pain if Ukraine now defaults on debts to Russia nearing US$30 billion. Putin's need for the EU and IMF to prop up Ukraine economically, to spare him the embarrassment of another recession and possible banking crisis, may be what forces him to stop at the Crimean border. If he goes further, the appetite for sanctions on Russia is stronger than the "realists" recognise. And Russia's ability to withstand them is far lower than business leaders and fund managers now trapped in Moscow would care to admit.

# AT: OIL FILLS IN

## Oil can't fill in- gas is uniquely key

**Cunningham 3/4** (Nick, 3/4/14, Washington DC-based writer on energy and environmental issues, "Russia Needs to Sell Gas More than EU Needs to Buy it," http://oilprice.com/Energy/Energy-General/Russia-Needs-to-Sell-Gas-More-than-EU-Needs-to-Buy-it.html)//RTF

The Russian occupation of Crimea has raised concerns about the European Union's dependence on its eastern neighbor for natural gas. The EU gets about 34% of its natural gas imports from Russia, a large portion of which transits Ukraine through a web of pipelines. For Eastern Europe, that dependence is much greater. In the brutally cold winter of 2009 Russia cut off gas supplies to Europe allegedly over a pricing dispute with Ukraine. However, it was also a lesson to Western Europe on its dependence on Russia for energy. Russia has a track record of using its natural gas supplies as a political weapon. The latest incursion into Ukraine has no doubt revived worries among European policymakers that saw what happened back in 2009. Thankfully, Vladimir Putin eased tensions on March 4, indicating that he wasn't seeking a military conflict. This allowed natural gas prices to fall back a bit after spiking by 10% the day before. But how vulnerable is Europe to the political machinations of the Kremlin? It appears that this time around the EU is in better shape. A mild winter and stagnant demand have left Europe with higher levels of inventory than in past years. According to a spokeswoman at the European Commission, the EU has 40 billion cubic meters of natural gas on hand in storage, which accounts for 10% of annual demand for the entire European Union. Those figures vary by country (Czech Republic and Slovakia have 90 days of supplies; Hungary two months; Austria six months), but as a bloc, the EU has 20% greater supplies at its disposal than it did last year. And it's not just seasonal patterns that have put the EU in a better spot. Europe has been reducing its reliance on Russian gas for a while now – in 2003 the EU imported 45% of its natural gas from Russia. It's now down to around one-third. Europe has been the beneficiary of the shale gas boom in the United States, even though the U.S. hasn't even really begun to export LNG. The surge in domestic production allowed LNG from other parts of the world – Qatar, for example – to be rerouted to Europe. (Several U.S. members of Congress have tried to exploit the Ukrainian crisis, arguing for the Obama administration to issue a blanket approval for LNG exports in order to isolate Russia. Over the short-term, that is nonsense – it will take years to build the terminals, so issuing licenses for exports won't do anything to help out Europe. Over the longer-term, that may be a different story). Europe has also undergone a big effort at implementing greater energy efficiency and renewable energy. Moreover, the U.S. has exported more coal to the EU in recent years, which competes with high priced natural gas there. Thus Europe is more secure than many believe. Moreover, the EU and Russia are so interdependent that it is unlikely Russia will proactively cut off gas supplies to Europe. In fact, Russia is arguably more dependent on the EU than the other way around. Europe has other options. Russia, on the other hand, is heavily dependent on oil and gas, which account for half of the country's total budget revenues. **For Putin, cutting off gas exports to Europe would be akin to him cutting off his nose to spite his face.** "It would be highly counterproductive for Russian interests at a time when Europe is considering how to respond to Russian actions in Crimea, to take steps that would have a major and negative direct impact on Europe," said Laurent Ruseckas, a senior associate at IHS CERA, as reported by Politico. The economic damage of energy supply disruptions cuts both ways. Putin likes to play the role of bully, but Russia is not exactly in a strong position in terms of using energy as a political weapon. Whether or not the Ukraine crisis deepens, it is unlikely that Moscow would intentionally turn off the taps for any prolonged period of time.

## Oil can't fill in- gas stoppage means catastrophe- the economy is on the brink

**Petroff 3/12** (Alanna, 3/12/14, London-based business reporter for CNNMoney, "4 reasons Russia will keep gas flowing," http://money.cnn.com/2014/03/12/news/economy/russia-gas-threat/)//RTF

Russia has turned off Europe's gas supplies before but will think long and hard before using energy as a weapon in its dispute with the West over Ukraine. Moscow last interrupted exports to Ukraine and the European Union in January 2009 after failing to agree prices and transit tariffs with Kiev, creating a humanitarian emergency in parts of the Balkans and economic problems in countries such as Hungary and Slovakia. Roughly half of Europe's gas from Russia is piped through Ukraine. Ukraine is facing economic turmoil and its new pro-European government is under pressure from Russian troops mobilizing in its southern region of Crimea. It is struggling to pay its bills and owes Russia's Gazprom about $2 billion, arrears that are growing daily. Gazprom has said it will cancel a discount on gas to Ukraine from April 1, and warned of a repeat of the 2009 crisis unless the debts are paid. Moscow could also order the taps to be turned off as retaliation for Western sanctions. G7 leaders warned Russia again Wednesday not to annexe Crimea or face "further action, individually and collectively." But history may not repeat itself. Here are four key reasons why Russia's threat may prove to be empty this time around. Economy: Russia's weakening economy is heavily reliant on exports of oil and natural gas, with energy accounting for roughly 70% of annual exports. The consequences of a stoppage could be far more devastating to Russia than anyone else. The Russian government is already forecasting that overall exports will decline by roughly 2% this year, and a gas disruption would make matters worse. Gazprom's gas exports are worth about $66 billion a year, roughly 13% of total Russian exports of $515 billion. They also account for 5% of tax revenues. Russia's economy is weaker than it was in 2009. Gross domestic product grew by about 1.3% last year compared to 3.4% in 2012. Many forecasters were expecting a slight upturn in 2014 but the standoff with Ukraine may mean it struggles to grow at all this year, according to some analysts. Related: Russia paying price for Ukraine crisis Warmer weather: Spring has sprung. As the

weather gets warmer, demand for natural gas to heat homes wanes. Officials know any disruption to natural gas supplies would not have the same impact as in 2009 when supplies were cut in the middle of winter. Eurasia Group's Russian energy analyst Emily Stromquist expects that if Russia were to cut supplies, the disruption would come in the next few weeks as Ukraine and Russia try to negotiate gas prices for the second quarter. Natural gas stockpiles: A warmer winter in Europe has allowed countries to build their reserves of natural gas, leaving them better able to cope with any short-term supply disruption. Why wealthy Russians choose London Why wealthy Russians choose London Oswald Clint, a senior analyst at Sanford Bernstein, estimates that if Russia halted gas exports right now, European inventories would keep the region going for over a month -- more than double the length of the 2009 outage. The latest data from Gas Infrastructure Europe, which represents pipeline operators, shows stockpiles are roughly 47% of total capacity, higher than at the same time over the previous three years. Related: Why Europe will balk at Russian sanctions The threat of shale gas: European leaders are already looking to reduce their dependency on Russian energy by developing alternative sources such as shale gas. And while the shale gas industry is still in its infancy, any further disruption to Russian supplies would simply give impetus to energy diversification efforts and boost the strong growth projected over the next decade. "It would be counterproductive to Russia in the long run because it would encourage other countries to wean themselves from Russian gas," said Pavel Molchanov, an energy analyst at Raymond James. "Gazprom is a huge cash cow for the Russian government. If in five to 10 years, eastern Europe no longer needs to buy as much natural gas from Russia as they do now, Russia will suffer in the long run," said Molchanov.

## Oil can't fill in- Russia needs oil AND gas to avoid collapse

**Parkin 10/4** (Brian, 10/4/14, Bloomberg Businessweek, "Russia Won't Cut Gas-Oil Flow to Europe, German Economists Say," http://www.businessweek.com/news/2014-04-10/russia-won-t-cut-gas-oil-flow-to-europe-german-economists-say)//RTF
Russia probably wouldn't cut off gas and oil exports even if the European Union imposes sanctions aimed at the Russian economy, Germany's leading economic research institutes said. A "spiral" of sanctions in the conflict over Ukraine might lead Russia to halt gas and oil flows to European Union countries "in the worst case," with a potentially "severe" impact on the EU, the institutes said in a report presented in Berlin today. Yet Russia's dependence on energy exports is a restraint on President Vladimir Putin, the forecasters said. "It is therefore likely that sanctions wouldn't impact on energy deliveries, even if an escalation occurred," according to the report. Curbs on Russian gas and oil exports "would hit both Russia and Germany hard." STORY: Why Russia Probably Won't Get the Gas Deal It Wants From Ukraine Fallout from sanctions over Ukraine were cited as a risk to growth in the forecast led by four German-based institutes, which present their outlook to the government twice a year. Germany's economy, the biggest in Europe, was forecast to expand by 1.9 percent this year, the fastest pace since 2011. The role of gas and oil deliveries as "vital arteries" of the Russian and German economies means that Putin has a "great interest" in preventing efforts by Germany to reduce energy imports, said the group led by the IWH, Ifo, RWI and DIW institutes. Chancellor Angela Merkel has portrayed Germany's energy dependence on Russia as limited and said the EU shouldn't fear punishing Russia if it encroaches further on Ukraine. STORY: Putin's Eurasian Union Looks Like a Bad Deal, Even for Russia Europe shouldn't be "filled with fear" that "a certain measure may cause problems for us," she said on April 5 in Berlin. Russia supplies about 37 percent of Germany's gas. Putin's government derives about half its revenue from oil and gas exports, the German institutes said.

## Oil and gas make up too much of revenue to depend on only one- oil can't fill in

**Grealy 3/26** (Nick, 3/26/14, Christian Science Monitor, "What if Europe stopped buying Russian gas tomorrow?," http://www.csmonitor.com/Environment/Energy-Voices/2014/0326/What-if-Europe-stopped-buying-Russian-gas-tomorrow)//RTF
It's only March, but it now seems clear that for service to the industry, the winner of European Shale Gas Man of the Year will go to Vladimir Vladimirovich Putin. It's hard to know who is more surprised: Putin, the EU or Russian investors. It wasn't meant to be like this. Putin forgot EU gas import dependency is matched by Russian export dependency. Gazprom has the pipeline export monopoly and only opened up LNG exports to include Novatek in 2013. Within Russia there are many oil and gas producers, but Gazprom, as direct descendant of USSR Ministry of Gas Industry, and still 38% owned by the Russian Federation, has the monopoly of exports. This from Oxford Institute of Energy Studies from a couple of weeks ago is as up to date as one can get: Sberbank estimates that Gazprom generated $162 billion of total revenues in 2013,34 meaning that gas exports to Europe as a whole accounted for 39% of this and exports through Ukraine for around 20%. Gazprom's overall reliance on gas exports has been reduced over the past decade as the company has diversified into oil (via GazpromNeft), power generation and other related businesses. Nevertheless, the company would clearly be hit very hard by any interruption to its European exports. It's ironic that the OIES was until recently thought of as being too conservative and too eager to highlight the major role Russian gas played in European energy to the exclusion of LNG and shale gas. But their point today is that one could almost say that the last thing anyone want's to do is what Russia, and Gazprom, has just done: revealing yourself as unreliable and expensive makes customers seek alternatives: If Gazprom were seen as a reliable supplier, rather than as a tool of the Russian government, it wouldn't be so vulnerable to competition. Of course, former K.G.B. agents aren't known for their respect for market forces, and Putin cares far more about using Russian power than about Gazprom's profits. But he's about to find out that, when you're running an authoritarian petrostate, energy profits are power: Russia depends on oil and gas revenue to fund its imperial ambitions and maintain stability at home. Alienating customers and giving competitors an opening isn't just bad business. It's bad politics. Putin likes to think of himself as a geopolitical grandmaster. But when it comes to natural gas he isn't thinking enough moves ahead. Putin certainly chose the wrong winter, but I guess he couldn't have spoilt the Sochi Games. Unlike the 30 year record low winter in the US, it has been very mild in Europe and as a result, Europe's gas storage is already 45% full at time where it normally would be empty. It would be easy enough to reach 100% with Norwegian, Algerian or LNG supplies alone over the lower use summer season. People forget that the simplified reason behind storage is that gas flows out of holes in the ground at the same

pressure in January or July. Therefore it has to go somewhere and gas storage is the answer. Russia could actually stop selling gas to Europe and no one would be any the wiser, or colder, until next winter. Russia would immediately notice the difference in the bank, which is why they don't want to interrupt supply. That presents an interesting possibility that is making the rounds in Brussels, Washington and NATO circles. One has to understand that after the 2006/09 Russia/Ukraine disputes, other things have changed, quite apart from shale and LNG. Europe's total gas demand is 10% below the peak as Europe burns more coal, renewables displace small, but noticeable, gas volumes and the economy has soured.The EU has also got Norway as even more reliable supplier eating more and more into what Russia considered a captive market. LNG of course has been already been disrupted by the evaporation of US demand, increasing the pool of suppliers. LNG is complex but essentially, if Europe was going to pay the price, which is still likely to be less than Russian gas is (or was), there's plenty of gas sloshing around. In short, "Russia needs Europe more than Europe needs Russia." Those words were spoken by David Cameron of all people in Brussels but the point was made explicit by US State Department Special Envoy for Energy Affairs Carlos Pascual: Russian gas giant Gazprom may lose the European energy market, since Europe can buy 160 billion cubic meters of gas from alternative sources – the exact amount it purchased from Gazprom in 2013, according to Carlos Pasqual, the former U.S. ambassador to Ukraine (2000-2003) and the State Department's Special Envoy for Energy Affairs. Energy analysts believe the European Union's initiative on reducing reliance on Gazprom is serious. Paqual, speaking during a press conference at the Ukrainian Crisis Media Center on March 21, estimated that over the next several years "at least 80-90 billion cubic meters of gas could enter the European market through new sources from Australia, Mozambique, Algeria, and other countries, while the U.S. government recently approved six new drilling licenses that could add yet another 80 billion." The last refers to the US LNG export story, a favourite of Republican Senators back home even as it ignores the fact that permitting exports and achieving them via terminals are two different things. Back to Brussels, and moving away from energy, initial fears that Europe, and specifically Germany and the UK ,would be too eager to give in to Russian blackmail have been proven wrong. Merkel seems to have given up on diplomacy, stating Putin is out of it. Chancellor Angela Merkel of Germany told Mr. Obama by telephone on Sunday that after speaking with Mr. Putin she was not sure he was in touch with reality, people briefed on the call said. "In another world," she said. The reality, which both Putin and many energy "experts" including green enablers like EcoFin didn't see coming, is that Brussels now thinks if push came to shove, they could do without Russian gas. Not only that, there is a new toughness in Europe that surprises themselves as much as anyone. Expect to hear a strange sound we thought we would never hear again: European sabre rattling. While no one is shooting, expect to see, if Putin wants it, various troop movements into the Baltics and Poland to match the Russian "exercises" near eastern Ukraine. Obama was heading to Brussels this week anyway to visit the EU. Significantly, he's now going across town to NATO HQ as well. But at the same time, there may be a more useful form of pre-emptive strike: A European gas buyers strike. Why wait for Russia to have the upper hand over supply in the event of a serious winter in 2014/15? Storage can only go up to 100% and that's easy to reach in spring and summer from non-Russian sources. But cutting off the cash now will have a more immediate impact on Russia. US and European financial sanctions are already starting to hurt. Recommended: Key world markets to see big changes. Get in-depth reports FREE. Europe can comfortably do without Russian gas for the rest of the year. In fact, we may even save money compared to Russian prices and save the cash for any possible LNG spikes this winter. Could Russia do without European money so easily? Let's cut them off first when they are more vulnerable instead of giving them billions to put us over a gas pipe next year. In the big game in Putin's mind, he can simply switch to China. But that's as fanciful a notion as those LNG Liberty Tankers unloading on the beach. Russia and China have been talking gas deals for years, agreeing on everything apart from that little matter of price. But, in a yet another own goal for FC Kremlin, China will get an even better gas price now they realise they have VV Putin in a judo hold. "With Western sanctions, the atmosphere could change quickly in favor of China" Going back to shale, the Brussels meeting is reconvening in June with some concrete plans to change the energy mix. Russia has shown itself to be unreliable and expensive. That's not a good combination in any business and Europeans will now rush to get gas from various sources including, starting at the end of 2015, US LNG. The US LNG is only available thanks to shale and if they aren't yet saying much on shale in public, even Merkel and Hollande understand the contradiction that buying US shale while banning our own is irrational. It's going to be interesting to see the Green reaction here. We may get the chance, albeit unwillingly for most, to see one of their pet theories in practice: Radical demand reduction. We certainly shall see proof that a rapid rise in renewables is as fanciful as instant LNG. Unfortunately, we may also see what it is allegedly being considered in the UK: The suspension of the large coal fired power station closures planned for next year. If the UK government hadn't been shaken by the combination of green complaints and inconsequential earthquakes, to preclude Cuadrilla's shale gas plans, the UK at least would be facing the possibility of domestic shale gas supplies coming on line this winter, instead of 2016/17. Even after the multi year obsession and enabling of the "risk" industry, we missed one of the greatest gambles of all: supply won't even show up.

## The Russian economy and influence is dependent on natural gas exports to Europe- oil can't fill in

**Vacula 4/8** (Jan, 4/8/14, St. Andrews Foreign Affairs Review, "Dependency on Russian Gas Makes the EU Impotent," http://foreignaffairsreview.co.uk/2014/04/gas/)//RTF

The crisis in Ukraine has put the EU on high alert not only because of the prospect of war on its border, but also because the conflict between Ukraine and Russia threatens energy security in the rest of the continent as 30 percent of the EU's natural gas imports come from Russia. At the European Council summit two weeks ago, the EU's 28 chiefs made a commitment to cut the EU's dependency on Russian natural gas. Speaking at the U.S.-EU Energy Council summit, Secretary of State John Kerry pledged U.S. help in weaning Europe off Russian energy. Calls for the EU's long-overdue energy diversification come as a result of Russia's increasing willingness to use its energy resources as a tool of political intimidation. "Russia uses natural gas as one of its main trump cards in its foreign policy toolkit," says Amanda Paul, a foreign policy analyst at the European Policy Centre, a Brussels-based independent think tank. "It is able to raise or drop prices as it feels like it, depending on its foreign policy needs, or cut out supplies altogether." This puts the EU in a vulnerable position, as 13 EU countries import more than 50 percent of their natural gas from Russia (and four of them rely solely on Russian exports). According to the International Energy Agency, the EU's energy dependency on Russian energy (including imports of both gas and oil) is set to rise from the current 60 percent to 80 percent by 2035. Surely, Russia is not likely to cut gas supplies to Europe any time soon.

Doing so would negatively impact Gazprom (which draws 60 per cent of its revenue from the European market), the Russian economy, and Putin's cronies. Moreover, the EU is better placed to withstand a disruption of gas supplies than in 2009, when Gazprom shut off gas exports to Ukraine. Largely due the recently opened Nord Stream pipeline, connecting Russian gas directly to Germany through the Baltic Sea, the share of gas flowing to Europe via Ukraine has decreased to 50 percent. Since 2009, the EU has also built several "interconnectors" between different countries designed to transport gas from countries with excess supplies to those that face a shortage. Although far from completed, this project is a major step in the creation of an integrated energy market in Europe. Most importantly, however, the dependency on Russia's energy supplies makes the EU rather impotent in effectively responding to crises such as the one in Ukraine. Poland's prime minister, Donald Tusk, expressed his concern over Europe's ability to respond if Russia moved beyond Crimea: "We will not be able to efficiently fend off potential aggressive steps by Russia in the future, if so many European countries are dependent on Russian gas deliveries or wade into such dependence." The creation of an integrated energy market within the EU and diversifying away from Russia's energy supplies would have two major benefits: First, it would allow the EU to assert a more unified and effective strategy vis-à-vis Russia when it comes to responding to the Kremlin's transgressions. At the moment, Russia negotiates energy supplies with individual member states, rather than with the EU as a whole. This means that the states dependent on Russia's gas are more interested in maintaining working relations with the Kremlin, rather than imposing harsh sanctions. Second, it would enable the West to target Russia's energy revenues that keep Putin's regime alive. Russia's economy is heavily dependent on energy exports, which accounts for about half of Russia's budget and about 30 percent of its GDP. The U.S. Congressional Research Service's report (CRS) suggests a handful of alternatives to Russia's gas, including gas from North Africa, Central Asia, and liquefied natural gas (LNG) from the U.S. Yet, the report concludes that completely replacing Russian gas will be difficult, if not impossible, and each option faces significant challenges. Perhaps the most widely discussed option is to import LGN from the U.S. "Once we have a trade agreement in place, export licenses for projects for liquefied natural gas destined to Europe would be much easier, something that is obviously relevant in today's geopolitical environment," said President Obama during his recent visit to Brussels. At the moment, however, the U.S. is still a net importer of natural gas, and it will take years and billions of dollars of investment before the U.S. can export substantial amounts of LNG overseas. The Department of Energy has so far approved seven LNG terminals, which can export a total of 9.2 billion cubic feet per day. Yet, this is only 20 percent of what the EU consumes every day (44.7 billion cubic feet on average). Moreover, even when the Americans start exporting, it is not the U.S. government who sells gas, but private companies. These companies are likely to sell to the customers willing to pay most. Unfortunately, these customers don't live in Europe, but in Asia. After the Fukushima nuclear shutdown, Japan's demand for LNG has been soaring (thus driving the price up). In the longer term, the CRS suggests that countries like Algeria and Libya have the potential to become some of the largest European suppliers. "Libya may have the greatest potential to increase natural gas exports to Europe once a new regime is established and possibly a new state oil and natural gas company in a post-Gadhafi Libya," the CRS concluded. But problems with infrastructure and political instability are getting in the way. Central Asia, too, sits on top of substantial reserves of natural gas. The EU's Southern Strategy is designed to transport gas from the Caspian region to the EU via Turkey. The Trans-Adriatic pipeline is already under construction and could bring modest amounts of gas from Azerbaijan to Europe by 2018. As the FAR previously reported, there are substantial reserves of natural gas in the Levant basin between Cyprus and Israel. The project for a new pipeline, which would transport gas to Europe by connecting to the Trans-Adriatic pipeline in Turkey, is making headway. At this point, however, the project is stalled by disagreements between Cyprus and Turkey. American intelligence company Stratfor reports that an alternative undersea pipeline from Israel to Turkey was announced last week. While the proposed pipeline is not likely to be constructed anytime soon, the joint-project could lead to normalisation in Israeli-Turkish relations. Yet, Europe cannot just rely on others to supply all of its energy needs. Countries such as Germany should abandon their aversion to nuclear energy. Germany's turn away from nuclear power has led to an increase in the consumption of coal, a bigger carbon footprint, and increasing dependence on Russia's gas. Despite some downsides, EU countries should embrace domestic shale gas. Britain and Poland seem to have the most potential but both countries face domestic protests. In addition, the EU should invest into its infrastructure in order to further increase its gas storage capacity as well as interconnectivity of existing pipelines. We should keep in mind that many major European energy companies have significant financial interests in maintaining Russian supplies and do not have a problem with depending on one country. In developing a more coherent energy policy, the EU will have to balance such views with those of the member states that are dependent on Russian gas exports and (rightfully) concerned about the Russia's political leverage. Russia's intervention in Ukraine is just another signal that the EU desperately needs to come up with a strategy that would create a truly integrated European energy market and help the EU diversify its energy resources away from Russia.

## Oil can't fill in- other countries can take advantage of it to hurt Russia

**The Economist 4/5** (The Economist 4/5/14, "Conscious uncoupling," http://www.economist.com/news/briefing/21600111-reducing-europes-dependence-russian-gas-possiblebut-it-will-take-time-money-and-sustained)//RTF

The avengers Oil-and-gas exports make up 70% of Russia's $515 billion annual exports, and 52% of the federal budget, according to America's Energy Information Administration. Europe's role as Russia's largest gas market already gives it a certain strength, as can be seen in the increasingly hard-nosed way EU competition officials are taking on some of Gazprom's practices. Oil (unlike gas) is easy to store, ship and trade, which means a single customer has less scope for action. But to sell its oil easily, Russia needs access to the world financial system. Its companies need to borrow on the bond market, and want their shares traded on international exchanges. They also need to process payments in dollars (the currency in which almost all international energy transactions are priced). This gives Europe and America considerable leverage, if they choose to exert it. Rosneft, Russia's biggest oil company, would be badly damaged if it were to be delisted on the London and New York stock exchanges. Financial sanctions could also make it hard for Russia to sell its oil to third parties. Sanctions have hurt Iran not by stopping it getting oil to customers, but by stopping it from receiving payment (though Russia would be harder to isolate). In

theory, Russia's gas exports to Europe are a weapon that points the other way. If Russia were to push farther into Ukraine, or to try its chances in Moldova, Georgia or the Baltic states, and Europe to take strong action in response, it could shut down exports completely, thus doing huge damage to the EU. But barring immediate, permanent and total victory, that would also doom Russia as a gas exporter. China already has worries about Russia's dependability as a supplier. Even with $475 billion in foreign-exchange reserves, the Kremlin cannot continue to run Russia's ramshackle and uncompetitive economy without its most important export revenues. The shock of the Crimean annexation should speed up sluggish European decision-making on storage, interconnection, diversification, liberalisation, shale gas and efficiency. And though the decision-makers may detest Mr Putin, in private they will admit that he may thus have done them a favour. They already knew what to do. They just didn't want to do it.

# 2NC EXPORTS TURN PRICES

**Gas exports increase domestic prices**

**CSM 3/12/14** (Daniel Graeber, guest blogger for Christian science monitor Christian Science Monitor, 3/12/14 "Would exporting energy to Ukraine raise US gas prices?", Christian Science Monitor, http://www.csmonitor.com/Environment/Energy-Voices/2014/0312/Would-exporting-energy-to-Ukraine-raise-US-gas-prices, JHR)

Michael Green, a spokesman for AAA, told Oilprice the jury is out on just how increased exports could affect consumers in the United States. Increased exports, he said, could stimulate oil production and reduce some market volatility. "On the other hand, exports would increase demand for domestic oil, which could push prices higher in the United States," he said. "Refineries in many parts of the United States **currently have access to relatively inexpensive crude oil** and could **lose that cost advantage if policymakers allow expanded oil exports."**

**International gas exports increase domestic prices- destroys the chemical industry**

**Huffington Post 3/12/14** (Huffington Post, "U.S. Push For Natural Gas Exports To Help Ukraine Won't Actually Help Ukraine,"

http://www.huffingtonpost.com/2014/03/12/ukraine-gas-exports_n_4945352.html, JHR)

The rush to weaken regulation of gas exporters in the name of helping Ukraine is not without opposition. Environmental groups have been joined by chemical manufacturers, the steel industry and power producers. Electric utilities and chemical makers fear **increased gas exports will lead to higher domestic gas prices, cutting into profits.**

# 2NC EXPORTS TURN MANUFACTURING

**Exports destroy the US manufacturing industry- it's on the brink now**

**NewEurope 3/12/14** (NewsEurope, 3/12/14, "US Natural Gas Will Not Curb Russian Influence," http://newseurope.me/2014/03/12/u-s-natural-gas-will-curb-russian-influence/, JHR)

Congress is pushing to expand the expedited approval process to include free-trade partners and key allies such as NATO members and Japan. However, with 100 billion cubic meters of export capacity already approved to go to countries without U.S. free-trade agreements, this expansion would be irrelevant, since the upper limit of U.S. natural gas exports is likely around 100 billion cubic meters. The United States is also increasing domestic consumption of natural gas, and Washington must balance its domestic needs with its foreign policy objectives**. Cheap natural gas is helping to revitalize the U.S. manufacturing sector**, and U.S. environmental policy includes replacing coal power plants with more efficient natural gas power plants. These domestic constraints are **especially strong because of a lackluster recovery from the 2008-2009 financial crisis** and a public that is typically more concerned with domestic issues.

**The US needs LNG that it will be exporting – resulting price changes will hurt manufacturing and the economy**

**Tverberg, 3/31/14** – has an M. S. from the University of Illinois, Chicago in Mathematics, and is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. She frequently asses graphs produced by others involved in the oil market. Former editor of TheOilDrum.com until the site was shut down. (Gail, "The Absurdity of US Natural Gas Exports," OurFiniteWorld.com, http://ourfiniteworld.com/2014/03/31/the-absurdity-of-us-natural-gas-exports/) //IS

Quiz: 1. How much natural gas is the United States currently extracting? (a) Barely enough to meet its own needs (b) Enough to allow lots of exports (c) Enough to allow a bit of exports (d) The United States is a natural gas importer Answer: (d) The United States is a natural gas importer, and has been for many years. The EIA is forecasting that by 2017, we will finally be able to meet our own natural gas needs. Figure 1. US Natural Gas recent history and forecast, based on EIA's Annual Energy Outlook 2014 Early Release Overview In fact, this last year, with a cold winter, we have had a problem with excessively drawing down amounts in storage. Figure 2. US EIA's chart showing natural gas in storage, compared to the five year average, from Weekly Natural Gas Storage Report. There is even discussion that at the low level in storage and current rates of production, it may not be possible to fully replace the natural gas in storage before next fall. 2. How much natural gas is the United States talking about exporting? (a) A tiny amount, less than 5% of what it is currently producing. (b) About 20% of what it is currently producing. (c) About 40% of what it is currently producing. (d) Over 60% of what it is currently producing. The correct answer is (d) Over 60% what it is currently producing. If we look at the applications for natural gas exports found on the Energy.Gov website, we find that applications for exports total 42 billion cubic feet a day, most of which has already been approved.* This compares to US 2013 natural gas production of 67 billion cubic feet a day. In fact, if companies applying for exports build the facilities in, say, 3 years, and little additional natural gas production is ramped up, we could be left with less than half of current natural gas production for our own use. *This is my calculation of the sum, equal to 38.51 billion cubic feet a day for Free Trade Association applications (and combined applications), and 3.25 for Non-Free Trade applications. 3. How much are the United States' own natural gas needs projected to grow by 2030? a. No growth b. 12% c. 50% d. 150% If we believe the US Energy Information Administration, US natural gas needs are expected to grow by only 12% between 2013 and 2030 (answer (b)). By 2040, natural gas consumption is expected to be 23% higher than in 2013. This

is a little surprising for several reasons. For one, we are talking about scaling back coal use for making electricity, and we use almost as much coal as natural gas. Natural gas is an alternative to coal for this purpose. Furthermore, the EIA expects US oil production to start dropping by 2020 (Figure 3, below), so logically we might want to use natural gas as a transportation fuel too. Figure 3. US Annual Energy Outlook 2014 Early Release Oil Forecast for the United States. We currently use more oil than natural gas, so this change could in theory lead to a 100% or more increase in natural gas use. Many nuclear plants we now have in service will need to be replaced in the next 20 years. If we substitute natural gas in this area as well, it would further send US natural gas usage up. So the EIA's forecast of US natural gas needs definitely seem on the "light" side. 4. How does natural gas's production growth fit in with the growth of other US fuels according to the EIA? (a) Natural gas is the only fuel showing much growth (b) Renewables grow by a lot more than natural gas (c) All fuels are growing The answer is (a). Natural gas is the only fuel showing much growth in production between now and 2040. Figure 4 below shows the EIA's figure from its Annual Energy Outlook 2014 Early Release showing expected production of all types of fuels. Figure 4. Forecast US Energy Production by source, from US EIA's Annual Energy Outlook 2014 Early Release. Natural gas is pretty much the only growth area, growing from 31% of total energy production in 2012 to 38% of total US energy production in 2040. Renewables are expected to grow from 11% to 12% of total US energy production (probably because the majority is hydroelectric, and this doesn't grow much). All of the others fuels, including oil, are expected to shrink as percentages of total energy production between 2012 and 2040. 5. What is the projected path of natural gas prices: (a) Growing slowly (b) Ramping up quickly (c) It depends on who you ask It depends on who you ask: Answer (c). According to the EIA, natural gas prices are expected to remain quite low. The EIA provides a forecast of natural gas prices for electricity producers, from which we can estimate expected wellhead prices (Figure 5). Figure 5. EIA Forecast of Natural Gas prices for electricity use from AEO 2014 Advance Release, together with my forecast of corresponding wellhead prices. (2011 and 2012 are actual amounts, not forecasts.) In this forecast, wellhead prices remain below $5.00 until 2028. Electricity companies look at these low price forecasts and assume that they should plan on ramping up electricity production from natural gas. The catch–and the reason for all of the natural gas exports–is that most shale gas producers cannot produce natural gas at recent price levels. They need much higher price levels in order to make money on natural gas. We see one article after another on this subject: From Oil and Gas Journal; from Bloomberg; from the Financial Times. The Wall Street Journal quoted Exxon's Rex Tillerson as saying, "We are all losing our shirts today. We're making no money. It's all in the red." Why all of the natural gas exports, if we don't have very much natural gas, and the shale gas portion (which is the only portion with much potential for growth) is so unprofitable? The reason for all of the exports is too pump up the prices shale gas producers can get for their gas. This comes partly by engineering higher US prices (by shipping an excessive portion overseas) and partly by trying to take advantage of higher prices in Europe and Japan. Figure 6. Comparison of natural gas prices based on World Bank "Pink Sheet" data. Also includes Pink Sheet world oil price on similar basis. There are several catches in all of this. Dumping huge amounts of natural gas on world export markets is likely to sink the selling price of natural gas overseas, just as dumping shale gas on US markets sank US natural gas prices here (and misled some people, by making it look as if shale gas production is cheap). The amount of natural gas export capacity that is in the approval process is huge: 42 billion cubic feet per day. The European Union imports only about 30 billion cubic feet a day from all sources. This amount hasn't increased since 2005, even though EU natural gas production has dropped. Japan's imports amounted to 12 billion cubic feet of natural gas a day in 2012; China's amounted to about 4 billion cubic feet. So in theory, if we try hard enough, there might be a place for the 42 billion cubic feet per day of natural gas to go–but it would take a huge amount of effort. There are other issues involved, as well. The countries that are importing huge amounts of high-priced natural gas are not doing well

financially. They aren't going to be able to afford to import a whole lot more high-priced natural gas. In fact, a big part of the reason that they are not doing well financially is because they are paying so much for imported natural gas (and oil). If the US has to pay these high prices for natural gas (even if we produce it ourselves), we won't be doing very well financially either. In particular, companies who manufacture goods with electricity from high-priced natural gas will find that the goods they make are not competitive with goods made with cheaper fuels (coal, nuclear, or hydroelectric) in the world marketplace. This is a problem, whether the country produces the high-priced natural gas itself or imports it. So the issue is not an imported fuel problem; it is a high-priced fuel problem. Another issue is that with shale gas, we are the high cost producer. There is a lot of natural gas production around the world, particularly in the Middle East, that is cheaper. If we add our high cost of shale gas to the high cost of shipping LNG long-distance across the Atlantic or Pacific, we will most definitely be the high cost producer. Other producers with lower costs (even local shale gas producers) can undercut our prices. So at best those shipping LNG overseas are likely to make mediocre profits. And there would seem to be great temptation to stir up trouble, to encourage Europe to buy our natural gas exports, rather than Russia's. Of course, our ability to provide this natural gas is not entirely clear. It makes a good story, with lots of "ifs" involved: "If we can really extract this natural gas. If the price can really go up and stay up. If you can wait long enough." The story makes the US look more rich and powerful than it really is. We can even pretend to offer help to the Ukraine. Perhaps the best outcome would be if virtually none of this natural gas export capacity ever gets built–approval or no approval. If it is really possible to get the natural gas out, **we need it here instead**. Or leave it in the ground.

# 2NC PLASTICS IMPACT

**US chemicals and plastics are high now – exporting LNG collapses them**

**Holeywell, 3/27/14** – covers energy for the Houston Chronicle. He previously wrote about transportation and municipal finance for Governing magazine, which is read by state and local government officials nationwide. Holeywell's previous work has been published by the Washington Post and USA Today, and he has appeared on CNN and public radio to discuss his articles. Holeywell, a Houston native, graduated from George Washington University in Washington, D.C. (Ryan, "Dow says US shouldn't bail out Europe with natural gas," Fuel Fix, http://fuelfix.com/blog/2014/03/27/dow-says-u-s-shouldnt-bail-out-europe-with-natural-gas/)//IS

But Fitterling — like others in the chemical sector — opposes the rush for more LNG exports. As it stands, companies like his, as well as manufacturers, have benefited from cheap natural gas prices, since the fuel is a key ingredients for petrochemicals that are used to make plastics and other components of manufacturing. While energy producers have been frustrated by low natural gas prices in the U.S., a new report says those low prices have helped crate 196,000 new manufacturing jobs in major metropolitan areas and given a $124 billion boost to sales for energy-intensive products, such as fabricated metals and plastics. Natural gas producers hope to export more of their product to other parts of the world where it commands a much higher price — even with the cost of shopping factored in. Chemical companies and U.S. manufactures fear those exports will increase the cost of their feedstocks and hurt the business. As it stands six LNG export facilities have received federal approval to broadly export; approximately two dozen are pending. Last year, chemical makers and manufacturers formed a coalition to lobby against the onslaught of LNG exports. Meanwhile, Fitterling's remarks come at a type when the U.S. chemical industry is booming. He said the sector is poised to have revenues of $1 trillion by 2018, citing data from the American Chemistry Council. There's a wave of chemical infrastructure investment in the U.S. as well. He said the chemical sector has announced 120 projects worth more than $100 billion in the U.S, with much of that total being spent along the Gulf Coast. That's good for the economy, he said, arguing that the U.S. benefits more from cheap chemical feedstocks than it does from increased natural gas exports.

**Plastics are key to space colonization**

SPI 1 (Society of the Plastics Industry, "Plastics in Aerospace: The Right Stuff," http://www.plasticsindustry.org/AboutPlastics/content.cfm?ItemNumber=633&navItemNumber=1118

During the past 50 years, aeronautics technology has soared, with plastics playing a major role in both pragmatic improvements and dramatic advances. In aircraft, missiles, satellites and shuttles, plastics and plastic materials have enhanced and sped significant developments in civilian air travel, military air power and space exploration. For many of the same reasons that make them the materials of choice for such a variety of products that benefit our lives, plastics are the right stuff in aerospace. From Necessity to Invention World War II accelerated the entry of plastics into aerospace both because other materials were scarce and because the possibilities for the materials' use were already being envisioned. During the war years, vinyl resins became a major substitute for rubber in Air Corps applications such as fuel-tank linings and fliers' boots. Plastics also began to be appreciated as first-choice materials. Virtually transparent to electromagnetic waves, the plastic used in radomes, which housed radar installations, allowed the waves to pass through with minimal loss, maximizing transmission to night-flying bombers. Its introduction was hailed as having significantly advanced the technology of airborne radar. The development of plastics that literally could "take the heat" associated with many aerospace applications and the launching of the U.S. space program spurred additional interest and extensive research in plastics for flight. Soon, plastic materials were common in aerospace for everything from interior trim in airplanes to nose cones for missiles. New words became familiar as "solid fuel boosters" on rockets and "ablative shields" for reentry came to rely on plastic materials. And when man landed on the moon, so did plastics. Taking Off The diversity of plastics and plastic-composite materials provides the qualities needed for a wide variety of aerospace needs. Plastic materials can be flexible enough to withstand helicopter vibration but rigid enough to ensure safe cargo. They can be transparent for easy observation, shatter resistant and offer ballistic protection. And, significantly, they can be both lightweight and strong. In the 1970s, the oil crisis forced aerospace companies to design aircraft that used less fuel. This meant more efficient engines, improved aerodynamics and reduced aircraft weight. It also meant a role for plastics. Today, jet engine manufacturers increasingly use plastics for the same reasons: reliability, efficiency, fuel savings and improved performance. The heavier the vehicle, the more fuel it takes to power it. For jetliners, the weight-to-fuel impact is tremendous. Just a one-pound reduction in weight translates into

$1,000 in lifetime fuel savings. As composite engines can offer weight reductions of some 300 pounds over other materials, savings can be enormous. Plastics also save fuel and money because their smooth contours improve aerodynamics. And plastics, which are less expensive to manufacture than heavier materials, produce parts that are more resistant to wear, require less upkeep and are easier to repair. In the structures, interiors and functional parts of air and space craft, new uses continue to be found for plastic materials, and new plastic materials continue to be created to meet aerospace needs. A Show of Force Plastic-composite materials are especially prevalent in today's sophisticated helicopters and other rotor craft. For these aircraft, the toughness, flexibility, crashworthiness and cost savings of plastic materials have motivated their large-scale use, both structurally and mechanically. These vehicles showcase how plastics can be tailored to fit a variety of needs, including opposing ones. Helicopters, which vibrate a great deal, can be called on to carry heavy payloads of equipment and personnel. The design of these vehicles calls for one set of materials that can compensate for the stresses caused by vibration and another that are stiff enough to hold up under a heavy payload. Plastics can do both, and more. In military applications of rotor craft, plastics have been on the front lines of innovation. A new entry into the field, the prototype X-wing craft, sports sophisticated plastic-composite wings that act as a rotor during takeoff and landing but lock into a set position once in the air. The stresses inflicted on such a craft are numerous and varied. Only stiff yet light composites can stand up to them. Though developed for military purposes, the X-wing is believed to have potential as a commercial shuttle and to be jet-powered. Other modern military rotor vehicles - including vertical takeoff aircraft, a gunship and a minesweeper - rely heavily on plastic materials to accomplish their specialized tasks. Plastics also are being, or are expected to be, used extensively for other innovative military craft. One material's near invisibility to radar makes it indispensable for "stealth" aircraft, which designers hope to make undetectable to infrared and optical spotters. And plastic fibers could play a significant role in a proposed blimp that would warn naval forces of surface-skimming missiles. Such vehicles are also being considered for nonmilitary use in fields such as forestry and scientific observation. Up to the Challenge The air and space craft of the next century increasingly will be made of plastics. Small composite planes will flourish, and commercial aircraft will soar with plastic wings and tails. The military will continue to depend on plastics to create ever lighter aircraft with fewer parts and the ability to evade detection. New aircraft designs with rear-mounted engines will rely on plastics to take the stress and better allocate weight. Still lighter materials will increase the crafts' capacities for more sophisticated avionics and other on-board systems. And plastics are expected to answer many of NASA's calls for materials to create and perfect high-performance supersonic/hypersonic aircraft, nuclear space power systems and space stations.

## Plastics key to aerospace development and military airpower

SPI 1 – Society of the Plastics Industry, http://www.plasticsindustry.org/industry/2113.htm

During the past 50 years, aeronautics technology has soared, with plastics playing a major role in both pragmatic improvements and dramatic advances. In aircraft, missiles, satellites and shuttles, plastics and plastic materials have enhanced and sped significant developments in civilian air travel, military air power and space exploration. For many of the same reasons that make them the materials of choice for such a variety of products that benefit our lives, plastics are the right stuff in aerospace. Continues… The air and space craft of the next century increasingly will be made of plastics. Small composite planes will flourish, and commercial aircraft will soar with plastic wings and tails. The military will continue to depend on plastics to create ever lighter aircraft with fewer parts and the ability to evade detection. New aircraft designs with rear-mounted engines will rely on plastics to take the stress and better allocate weight. Still lighter materials will increase the crafts' capacities for more sophisticated avionics and other on-board systems. And plastics are expected to answer many of NASA's calls for materials to create and perfect high-performance supersonic/hypersonic aircraft, nuclear space power systems and space stations.

# AT: ASIA PIVOT

## Exports are key to US influence in the pacific and maintaining the Asia Pivot

**Ebinger et al** 5/02/ **12** (*Charles, a senior fellow and director of the Energy Security Initiative at the Brookings Institution AND **Kevin Massy, Assistant Director of the Energy Security Initiative at Brookings AND ***Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative at Brookings, May 2012, "Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas," Brookings Institute, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502_lng_exports_ebinger.pdf, JHR)

Whether U.S. LNG exports contribute to reduced carbon dioxide emissions through the displacement of coal fired power generation or to the crowding out of renewable and nuclear energy in the global energy mix is something of a moot point. According to the IEA, global power generation is projected to exceed 27,000 terawatt hours per year by 2020.116 Even assuming U.S. exports of 6 bcf/day (on the upper end of the range of expectations), zero losses due to transportation, regasification, and transmission, and a high natural gas power plant efficiency level of 60 percent, such volumes would account for just over one percent of total global power generation.117 Therefore, although the domestic environmental impacts associated with shale gas extraction may, pending the outcome of further study, prove to be a cause for concern with respect to greenhouse gas emissions, the potential for U.S. LNG exports to make a meaningful impact on global emissions through changes to the global power generation mix is negligible.

## We don't need a shift- Japanese demand is down

**Iwata 13** (Mari, 7/24/13, Wall Street Journal, "Natural-Gas Demand Slips in Japan, World's No. 1 Importer," http://online.wsj.com/news/articles/SB10001424127887324110404578625120113824106)//RTF

Japan's demand for imported natural gas, which ballooned after the 2011 Fukushima Daiichi nuclear disaster, is falling—and may deflate a lot further if the government succeeds in getting dozens of idled nuclear reactors restarted. Imports of liquefied natural gas in the first half of 2013 were down 2.7% to 43.4 million tons, the first half-yearly decline since the nuclear accident more than two years ago, the ministry of finance reported Wednesday. Last year imports were up 11%, to 87.3 million tons, after a 12% rise in 2011. The reversal of the trend is bad news for companies developing or planning LNG export facilities in locations as varied as Australia, Russia, East Africa or North America. Japan is the world's top LNG importer. But bad news for gas producers could be good news for coal miners in those same regions. With all but two of 50 licensed reactors idle, what's currently capping Japan's use of imported LNG—which has been generating 40% of its electricity—is in part heavier use of coal. Utilities have repaired some earthquake-damaged coal-fired power plants and built new ones that can produce electricity more cheaply than gas-fired plants. In April, Tokyo Electric Power Co. 9501.TO +0.24% , operator of the Fukushima reactors, started making electricity at two new coal-fired 1.6-gigawatt power stations. Tohoku Electric Power Co. 9506.TO -0.59% has restarted two coal units with a combined two gigawatts of capacity since late last year. The chief executive of one of Australia's largest miners, Whitehaven Coal Ltd. WHC.AU 0.00% , said recently he is targeting Japan over big buyer China for future thermal-coal sales because Japan's tight environmental controls means demand for high-quality, less-polluting Australian coal over cheaper varieties from elsewhere. Enlarge Image Liquefied-natural-gas storage tanks and a membrane-type tanker at a Tepco power plant east of Tokyo earlier this year; Japan, the top LNG buyer, imported 2.7% less in the first half of 2013. Reuters "LNG demand may not fall sharply," said Tomomichi Akuta, analyst at Mitsubishi UFJ Research & Consulting, "but it won't rise any further even if nuclear power doesn't come back soon." What could turn the slippage in demand into a real tumble would be the realization of the ruling Liberal Democratic Party's enthusiasm for restarting reactors. "It depends on when and how many reactors the authorities approve," said Hidetoshi Shioda, analyst of SMBC Nikko Securities. Japan's Institute of Energy Economics, a think tank, last year forecast that restarting 26 reactors would cut LNG demand 8.8% the following year. Utilities have asked Japan's Nuclear Regulation Authority to clear an initial 12 reactors for restart, on the grounds they meet new safety regulations. But there are hurdles, including public hostility. Pro-nuclear Prime Minister Shinzo Abe may be flying high, coming off a big election win Sunday for his ruling party, but he hasn't managed to overcome the resistance to nuclear power. A poll by Asahi newspaper a week ago showed 58% opposition to restarting any reactors.

## Russia's already moving in anyway- they're exporting gas to China and have a deal in the works for cheap exports to Japan

**Inajima and Urabe 5/27** (Tsuyoshi and Emi, 5/27/14, Bloomberg News, "Japanese Lawmakers to Lobby Abe for Russian Gas Pipeline," http://www.bloomberg.com/news/2014-05-27/japanese-lawmakers-to-push-abe-on-russia-natural-gas-pipeline.html)//RTF

Japanese lawmakers are reviving efforts for a 600 billion yen ($5.9 billion) natural gas pipeline from Russia, which last week signed a supply deal with China, to cut energy costs after the Fukushima nuclear disaster. A group of 33 lawmakers is backing the 1,350-kilometer (839 miles) pipeline between Russia's Sakhalin Island and Japan's Ibaraki prefecture, northeast of Tokyo, Naokazu Takemoto, the secretary general of the group, said in an interview on May 23. He plans to propose the project to Prime Minister Shinzo Abe as early as June so it's on the agenda when Russian President Vladimir Putin visits in autumn, he said. The shutdown of Japan's nuclear reactors after the 2011 Fukushima disaster has spurred renewed interest in the Russia-Japan pipeline link, which has been discussed for more than a decade, Takemoto said. The effort also highlights Russia's expanding role as a energy supplier to Asia after the country signed a $400 billion deal last week to sell China 38 billion cubic meters of gas annually for 30 years. Japan spent a record 7 trillion yen last year on liquefied natural gas imports, more than double the cost three years ago, according to the Ministry of Finance. The country could lower its energy bill by getting gas directly by pipeline rather than more-expensive LNG, which is shipped by tankers, Takemoto said. "Building an LNG plant requires a lot of money and makes the per unit cost of gas very expensive," said Takemoto, who serves in the House of Representatives as a member of the ruling Liberal Democratic Party. "Japan would be better off" buying gas via pipeline, he said. China Deal The Russia-China accord for gas supplies by pipeline from eastern Siberia was probably reached at a price of $10.50 to $11 per million British thermal units, Bank of America Corp. said in a report yesterday. That compares with a current spot price of $13.30 for liquefied natural gas cargoes delivered to Northeast Asia. Spot LNG prices are at a 19-month low after falling from a record of $19.70 in February, according to data compiled by Bloomberg from New York-based Energy Intelligence Group. While Japan could buy Russian gas at a cheaper price similar to the China deal if the pipeline is built, Russia would also benefit from the project, said Osamu Fujisawa, a Tokyo-based independent energy economist. "Russia wants to extend its market," Fujisawa said in a phone interview today. "It made a deal with China, and Japan is the next target. Then, Russia doesn't have to rely on Europe," which is trying to reduce dependence on the country's gas supplies amid the crisis in Ukraine, he said. Post-Fukushima The proposed Russia-Japan pipeline is designed to transport as much as 20 billion cubic meters of natural gas annually, according to proposals by the group consisting of lawmakers from ruling parties LDP and New Komeito. That's equivalent to about 15 million metric tons of LNG, or 17 percent of Japan's imports. All of Japan's 48 reactors are shut for safety checks after the magnitude-9 quake and ensuing tsunami in March 2011 caused a triple meltdown at Tokyo Electric Power Co.'s Fukushima Dai-Ichi plant, shaking public confidence in nuclear energy. Power companies have applied for the Nuclear Regulation Authority's safety review of 18 reactors. About half of Japan's reactors may never be restarted because of the nation's tougher safety standards, Yuji Nishiyama, a Tokyo-based analyst with JPMorgan Securities Japan Co., said in a May 26 phone interview. That means the utilities would have to keep importing a large amount of natural gas to fill the gap left by the shutdown, he said. Japan, the world's biggest LNG importer, bought 87.49 million metric tons of the fuel in 2013, according to finance ministry data. Russia accounted for 9.8 percent of the country's gas and was the fourth-biggest supplier after Australia, Qatar and Malaysia.

## Aff isn't sufficient to solve the Asia pivot (also a cp card)

**Luft 5/13** (Gal, 5/13/14, Senior adviser to the United States Energy Security Council, "Can America Stop Russia's Energy "Pivot" to Asia?," http://nationalinterest.org/feature/can-america-stop-russias-energy-pivot-asia-10449?page=2)//RTF

For centuries, European royal families forged marital alliances with friends and adversaries in order to ensure security and influence. Prominent among them was Russia. In the 300 years prior to Czar Nicholas II's 1894 marriage with Queen Victoria's granddaughter Alexandra, almost at any point Russia was tied by marriage to its European neighbors. Today, it is no longer royal blood that solidifies Russia's foreign relations but the energy pipelines that run the lifeblood of national economies. Vladimir Putin's coercion of Europe through his control over its energy supply is widely known. But post-Crimea, his energy leverage over Europe may have reached its apex. By the end of this decade, North American liquefied natural gas (LNG) will land in Europe from the West. From the east, the Trans-Anatolian and Trans Adriatic Pipelines will open a new energy corridor from the Caspian to Europe, crowding out Russia's gas even further. To sustain Russia's economy and to maintain its position as an energy power, Putin must extend Russia's energy tentacles into Asia, where the thirst for oil and gas is insatiable. Recently, the Russian parliament wrote off 90 percent of North Korea's debt, a gesture estimated at $10 billion, in exchange for Pyongyang's agreement to build a pipeline that would run from Sakhalin through North Korea to South Korea, the world's second largest gas importer, with the goal of supplying South Korea with 10 billion cubic meters of gas annually. In doing so, Russia will not only assign North Korea the same role it assigned Ukraine—a vulnerable energy-transit country which holds the key to an economy much larger than itself—but it could also exert influence over the third largest economy in the Asia Pacific, potentially raising South Korea's dependence on Russian gas from 6 to 30 percent. Important as the South Korean market may be for Russia, China is an even bigger prize. Putin's ability to secure permanent access to the Chinese gas market is as crucial for his own 'Pivot to Asia' strategy as Russia's gas is crucial to China's recently declared war on smog. Putin's visit to Beijing this week provides the two neighbors an opportunity to seal a massive gas deal through a yet-to-be-built pipeline from Western Siberia to Northwestern China. This project, which has suffered endless delays over the past fifteen years, mainly due to disagreements over price, may finally become a reality as both countries need each other now more than ever before. Relations with China are critical to another piece of Putin's pipeline strategy—his plan to penetrate the Indian energy market. Russia and India are negotiating the construction of a $30 billion pipeline—the most expensive ever—to connect Russia's Altai mountain region to the Xinjiang province in northwest China and then to northern India. Unlike the gas pipelines to Korea and China, the pipe to India will transport oil. It is a little known fact that Russia is much more of an oil exporter than a gas exporter. It exports 70 percent of its crude production while exporting only 30 percent of its gas production. From a financial standpoint, its oil revenues are

almost seven times larger than gas revenues. There is no better market for Russia's oil than India, which has just displaced Japan to become the world's third biggest economy in terms of purchasing power parity. The above three pipelines to China, India and the Koreas (should they be built) would make one third of humanity beholden to Russia's energy resources and provide Russia inordinate power on the world stage, which could make its shenanigans in Europe a fond memory. However, the United States has failed to articulate an alternative vision for Asia's energy security. In fact, energy security played almost no role in President Obama's recent visit to Asia. To thwart Russia's energy export scheme, Washington must present its own strategy for Asian energy security and convince its allies in Asia of its advantages. This will not be easy due to Russia's geographical proximity to Asia, but there are options to consider. First, as guarantor of South Korean security, Washington should publically take a strong position against the Russia-Korea pipeline. It should clearly express its concern to Seoul that this pipeline will not only embolden and enrich Kim Jong-un, but it will also inject Russia into the already challenging security landscape of the Korean Peninsula. Here Washington would find a common interest with Beijing, which would also prefer not to see Russia become part of the dynamics in the Peninsula. Second, Washington should convince its Asian allies that it is committed to becoming a leading energy-exporting country and a major player in the global energy-trade system. This means expediting the permission process for export terminals for coal and LNG and the removal of the anachronistic four-decade ban on crude oil exports. Third, the United States should enhance cooperation with Asia on unconventional gas. China owns the world's largest shale reserve. Japan is a global leader in the development of methane hydrates. According to estimates, there is more energy in the world's methane hydrates than in all the world's oil, coal and gas put together. Unlocking the secret to their safe and environmentally responsible extraction could be a game-changer in the global energy landscape. Fourth, the United States should support measures aimed at reducing LNG prices in the Asia-Pacific to make LNG more competitive with Russian pipeline gas. The price of natural gas in the Asia-Pacific is mostly indexed to oil or oil products. In order for consumers to enjoy a competitive gas market, pricing should be indexed to spot prices that are tied more closely with supply and demand fundamentals in the region (gas-to-gas competition). However, despite the fact that the Asia-Pacific is the second largest gas market in the world, it lacks a single natural gas trading hub to facilitate the transparent exchange of the commodity and provide more competitive prices. The amount of gas currently traded via pipelines is very limited, and the market relies increasingly on LNG, which is more conducive to gas-to-gas competition. If Russia succeeds in carrying out its pipeline strategy this will undermine the prospects of an Asian trading hub, as pipeline gas is more likely to be tied to oil. This will result in perpetuation of the oil indexation to the detriment of the region's economies. Unsurprisingly, both OPEC and the Gas Exporters Country Forum (of which Russia is a member) endorsed oil indexation as the preferred pricing scheme to trade natural gas. The United States should work with the governments of the Asia-Pacific—China, Japan and South Korea—to gradually shift the gas market toward gas-to-gas competition and toward the establishment of at least one regional trading hub. This will not happen overnight but the intention and vision should be articulated in order to steer investments in natural gas infrastructure and to facilitate the emergence of a competitive and transparent market. Finally, Washington should strive to include China and India as members of the International Energy Agency (IEA), even though those two countries are not members of the OECD and therefore technically not eligible for IEA membership. Being part of a multinational energy-security mechanism would strengthen China and India's connection to the club of rich industrialized democracies instead of to Russia, whose application for OECD has been suspended in light of its recent behavior. Transnational pipelines are the contour lines of geopolitics in the twenty-first century. Russia's design is now apparent to all. America needs to show it has one as well.

### Exporting LNG to another country requires a long and costly authorization process – we can't get there before Russia

Loris '13 [February 11, 2013. Nicolas Loris is the Herbert and Joyce Morgan Fellow at the Thomas A. Roe Institute for Economic Policy Studies for the Heritage Foundation. "U.S. Natural Gas Exports: Lift Restrictions and Empower the States" http://www.heritage.org/research/reports/2013/02/us-natural-gas-exports-lift-restrictions-and-empower-the-states]

In order to export natural gas from the United States, companies must obtain approval from both the Federal Energy Regulatory Commission (FERC) and the Department of Energy's Office of Fossil Energy. The Natural Gas Act of 1938 grants FERC the authorization to site both import and export facilities in accordance with the National Environmental Policy Act (NEPA) and existing statutes to satisfy environmental requirements including the Clean Water Act (Sections 401 and 404), the Coastal Zone Management Act (Section 307(c)), the National Historic Preservation Act, the Endangered Species Act, and the Clean Air Act (Section 502). States have the authority to veto any approval decision by FERC by denying the facility's environmental permits.[20] The applicant must also satisfy requirements under the Maritime Transportation Security Act (MTSA) of 2002 as well as the Department of Transportation's Office of Pipeline Safety requirements. FERC will approve the project if the agency believes the facility is in the public's interest.[21] Section 3 of the Natural Gas Act also gives the Department of Energy's Office of Fossil Energy (FE) a say in the decision to export natural gas.[22] After a company files an application with the DOE, the agency must determine whether the project is in the public's interest. The DOE can arbitrarily deny a permit if the agency believes the total volume of natural gas exported is not in the public's interest. A facility is automatically authorized if the country the U.S. is exporting to is a recipient nation that has a free trade agreement (FTA) with the U.S.[23] If the importing country does not have an FTA, the Energy Department must then publish the notice in the Federal Register for a comment period, and ultimately determine if the facility is in the public's interest. Houston-based Cheniere Energy filed an application with the DOE in September of 2010 to export LNG to non-FTA countries, and the EPA

conditionally approved the permit in May 2011. Cheniere submitted its review process to FERC in December 2011 and FERC approved the project in April of 2012.[24] However, after FERC completed its review in 2012, the Sierra Club asked the DOE to reconsider the permit, arguing that the environmental review was incomplete. The DOE then delayed a decision to stay the permit but ultimately dismissed the Sierra Club's request.[25] Even without the Sierra Club's obstruction, the DOE review process needlessly **added a year** to the review process.

### Export permitting process takes forever and means other countries gain opportunities

Loris '13 [February 11, 2013. Nicolas Loris is the Herbert and Joyce Morgan Fellow at the Thomas A. Roe Institute for Economic Policy Studies for the Heritage Foundation. "U.S. Natural Gas Exports: Lift Restrictions and Empower the States" http://www.heritage.org/research/reports/2013/02/us-natural-gas-exports-lift-restrictions-and-empower-the-states]

Thus far, the DOE has only granted one permit out of the 17 applications the EPA received to export domestic LNG. All applications have FTA-approval but are under DOE review for approval to export to non-FTA countries.[26] A number of countries around the world already have LNG export terminals, and are expanding their export capacity. In fact, 46 LNG export terminals exist worldwide, with Qatar being the world's largest exporter, and Algeria, Australia, Indonesia, and Malaysia all substantial exporters as well.[27] Of the 13 LNG export projects currently under construction, eight of them are in Australia.[28] Excluding the terminals proposed in the United States, there are more than 20 planned in other countries.[29] As the Department of Energy wavers on approving LNG terminals, other countries are pursuing this valuable opportunity. Of course, natural gas exports are not a zero-sum game. Companies in other countries expanding their LNG exporting capacity do not necessarily negate opportunities for companies in the U.S. to do the same. If, however, a slow permitting process **needlessly delays export terminals**, the economics could change as exports from other countries lower prices in regions the U.S. wishes to engage. If exporting LNG from U.S. ports is no longer economically viable as a result of international competition, companies will not seek to build more terminals. But they should not be forced out of opportunities by an **unnecessarily slow DOE**.

### Aff is too late- Russia has a foothold

**Unger 5/21** (David, 5/21/14, Staff writer for Christian Science Monitor, "China signs deal for Russian gas, boosting Putin's Asia pivot (+video)," http://www.csmonitor.com/Environment/Energy-Voices/2014/0521/China-signs-deal-for-Russian-gas-boosting-Putin-s-Asia-pivot-video)//RTF

The deal is done. Russia and China reached an agreement Wednesday for Russia to supply China with about a quarter of its annual natural gas consumption over three decades starting in 2018. Russia plans to invest $55 billion and China will contribute about $25 billion, according to Russian President Vladimir Putin, to help build the necessary pipeline and infrastructure to develop gas fields in eastern Siberia and bring those supplies to population centers in northeast China. The total value of the deal, which will supply 38 billion cubic meters of gas annually, is estimated to be $400 billion. "[T]his is indeed a historic event for Russia's gas sector," Mr. Putin told reporters at a press conference in Shanghai, wrapping up a two-day state visit with Chinese President Xi Jinping. "It is historic even looking back to the Soviet era, too. This is the biggest contract in terms of sale by volume to any one country in the sector's entire history, whether the Soviet period or modern Russia."

Recommended: Think you know energy? Take our quiz. For decades, the expansion of the oil-and-gas empire that fuels Russia's economy has been hemmed in by its westward-oriented pipelines and flagging European growth. Russia has already built a major oil pipeline to China, and Wednesday's deal moves the ball forward on a parallel gas pipeline that physically and contractually binds together two of the world's largest economies. It is a powerful symbol of Eastern unity just as the Ukraine crisis dims Moscow's future in the West. "[I]t gives both leaders something they can show to internal supporters and citizens, that they are capable of forging strategically important economic ties with foreign partners," Steven Lewis, a research fellow on China at Rice University's Baker Institute for Public Policy in Houston, writes via e-mail. "This explains the haste to finally sign, as both leaders were facing criticism of their policies that are isolating them internationally, especially in the West." The deal is a major step in a Russian pivot to Asia that would see European markets playing a smaller role in Moscow's plans for the future. To be sure, Europe remains by far Russia's largest gas customer, and that will not change anytime soon. Still, the Ukraine crisis is accelerating Europe's efforts to diversify its suppliers, and Russia's efforts to diversify its customers. The Russian-China gas deal further widens the expanding gulf between Brussels and Moscow. It comes as Russia, Ukraine, and the European Union are negotiating a gas deal of their own. Ukraine owes Russia roughly $3.5 billion in unpaid gas bills, and Moscow has threatened a

partial or complete shut-off of supplies if debts are not repaid by June 1. In a letter to Putin Wednesday, European Commission President José Manuel Barroso urged Russia to ensure gas supplies to European customers continue uninterrupted. A deal with China might make Russia more aggressive in its dealings with the West, but the physical separation of the two gas sources means competition for resources might not be as intense. Russia is developing fields in eastern Siberia for gas consumers in China, whereas the gas for Europe comes from western Russia. That makes it difficult to draw a line between the Russia-China deal and Russia's ongoing relations with Ukraine, according to Dmytro Naumenko, an energy analyst at the Kiev-based Institute for Economic Research and Policy Consulting. "I doubt that Russia will get a real instrument" of leverage over Ukraine in gas negotiations, Mr. Naumenko wrote via e-mail. "[T]he Chinese 'success' will be used only as a PR element by Russia." In the US, it will put added pressure on the Obama administration to boost exports of liquefied natural gas (LNG). New drilling techniques have unlocked a boom in US natural gas production, and the US Department of Energy has already approved a significant quantity of natural gas exports. But it takes time and large amounts of capital to build out the necessary export infrastructure, and officials also have to consider the domestic environmental and economic implications. Still, many in Congress have criticized the president for not moving quickly enough, and the Russia-China deal suggests Putin isn't waiting to tap energy-hungry Asian markets. "The US is doing everything it can at the moment to be an actor in the Asian markets, but it clearly can't ramp up supply as quickly as and in the volumes that Russia can, because of proximity and pipelines," Kristine Berzina, a program officer on energy and society in the German Marshall Fund's Brussels office, says in a telephone interview. "Russia has an infrastructure advantage and a geographic advantage over the US."

## Previous Chinese efforts means the aff can't solve

**Cooper and Perlez 5/31** (Helene and Jane, 5/31/14, Economic Times, "Is US influence eroding in Asia and enhancing China's power?," http://articles.economictimes.indiatimes.com/2014-05-31/news/50229157_1_south-china-sea-asia-united-states)//RTF

SINGAPORE: The Obama administration's 3-year-old plan to shift its foreign policy focus to Asia was supposed to shore up interests in a critical region, push new free trade pacts and re-establish US influence as a balance to a growing China, after a decade of inattention. But as Secretary of Defense Chuck Hagel visited this city-state for a security conference with all of the interested parties Friday, that much-vaunted Asia policy appeared to be turning into more of a neighborhood street fight, with the United States having to simultaneously choose sides and try to play the role of referee. All around Asia, China is pushing and probing at America's alliances, trying to loosen the bonds that have kept the countries close to Washington and allowed the United States to be the pre-eminent power in the region since World War II. In just the past week, China traded punches with Vietnam and Japan. A Chinese fishing vessel rammed and sank a Vietnamese fishing boat Monday near a Chinese deep-water oil rig that was placed in disputed waters off the coast of Vietnam. That confrontation followed an encounter last Saturday in which two pairs of Chinese fighter jets flew close to Japanese surveillance and electronic intelligence planes, in disputed airspace claimed by both countries. By itself, neither encounter rises to the level of the trans-Pacific standoff that occurred in the East China Sea last year after China asserted military authority over airspace that included uninhabited islands claimed by Japan. But taken together, those episodes form a pattern of escalating maritime and air tensions in the Pacific that have frustrated and worried US officials. In his strongest words yet on the territorial disputes, Hagel on Saturday morning implicitly accused China of "intimidation and coercion" as he delivered his keynote address to the conference. China has called the South China Sea "a sea of peace, friendship and cooperation," Hagel said. "But in recent months, China has undertaken destabilizing, unilateral actions asserting its claims in the South China Sea." China's goal is to show Washington that if it maintains alliances in Asia, it risks a fight with Beijing, said Hugh White, a former senior Australian defense official who worked closely with Washington and is now professor of strategic studies at the Australian National University. "China is deliberately doing these things to demonstrate the unsustainability of the American position of having a good relationship with China and maintaining its alliances in Asia, which constitute the leadership of the United States in Asia," White said. China is betting that America, tired and looking inward, will back off, he said, eroding its traditional place of influence in Asia and enhancing China's power. Even as Hagel and the United States have adopted a public posture that backs Japan - and, to a lesser extent, the Philippines, Vietnam and any other country that finds itself at odds with China - some administration officials have privately expressed frustration that the countries are all engaged in a game of chicken that could lead to war. "None of those countries are helping matters," a senior administration official said. The official, who spoke on the condition of anonymity in order to talk candidly about USpolicy, said that the United States would publicly back Japan and that treaty obligations mean that if Japan and China go to war, the United States will almost certainly be dragged into it. But, he added, administration officials have privately prodded their Japanese counterparts to think carefully before acting and to refrain from backing China into a corner. "If these are kids in the schoolyard, they are running around with scissors," said Vikram J. Singh, who until February was the USdeputy assistant secretary of defense for South and Southeast Asia. "Wars start from small things, often by accident and miscalculation - like dangerous maneuvers by aircraft that result in a collision or aggressive moves that lead to an unexpected military response." Speaking at the opening session of the conference on Friday night, Japan's prime minister, Shinzo Abe, who has also had a role in stirring tensions in the region by embracing a more assertive military stance, bypassed a question about whether he was willing to go to war with China over the disputed islands in the East

China Sea, which Japan calls the Senkaku and China calls the Diaoyu. Instead, Abe said cryptically that it was "important that we all make efforts" so that certain "contingencies can be prevented." Hagel and the large USmilitary contingent on hand, including Gen. Martin E. Dempsey, the chairman of the Joint Chiefs of Staff, and Adm. Samuel J. Locklear III, the commander of the USPacific Command, spent their time shuttling from delegation to delegation to make sure those contingencies did not come up. "Any good teacher knows that you want to get the kids to behave in the first place, rather than try to referee a dispute that breaks out," said Andrew L. Oros, an associate professor of political science at Washington College in Chestertown, Maryland, and a specialist on East Asia. But showing how deep some of the enmity runs, a Chinese officer in the audience took Abe to task for his visit last year to the Yasukuni shrine, which honors Japan's war dead, including several war criminals who were executed after Japan's defeat. The visit angered China and South Korea, which suffered under Japan's empire-building efforts in the 20th century, and it annoyed the United States, which issued a statement calling the visit "an action that will exacerbate tensions with Japan's neighbors." "Millions of people in China, Korea and many countries in this region have been killed by the Japanese Army," the Chinese officer said, asking whether Abe planned to honor them. Abe spoke of the remorse that Japan felt after World War II. But he added that it was common for world leaders to honor those who fought for their country. While much of the maritime and air disputes go back to ancient territorial claims, the Obama administration may have fanned the tensions with its shift toward Asia, some foreign policy experts said. Many Chinese believe that the shift is intended to check China's rise. "For that reason, you cannot expect China to welcome the alliance system because it doesn't serve China's interest," said Wu Xinbo, the director of the Center for American Studies at Fudan University in Shanghai. Chinese President Xi Jinping gave a strong hint of his objectives in a speech in Shanghai on May 19, when he outlined a new Asian security strategy that would deliberately exclude the United States, analysts said. "We need to innovate our security concepts, establish a new regional security cooperation architecture and jointly build a shared win-win road for Asian security," Xi said at the Conference on Interaction and Confidence Building Measures in Asia, a group that includes China, Russia and Asian countries but not the United States, according to the state-run news agency Xinhua. At another conference, in Beijing, Adm. Sun Jianguo, the deputy chief of the general staff of the People's Liberation Army, expanded on Xi's ideas, describing the USalliance system as an antiquated relic of the Cold War that should be replaced by an Asia-centric security architecture, participants said. As word filtered through the region about Xi's new concept - so far, only sketched in a bare-bones outline - it was referred to as "'Asia for Asians,' which means China decides as the biggest guy on the block," said a senior Asian diplomat from a country allied with the United States, who declined to be named for fear of alienating China.

# AT: CENTRAL ASIA

**No impact to Central Asian instability**

**Blinova, 4/7/2014** - writer for Voice of Russia, (Ekaterina, "Europe, Mideast and Central Asia pose biggest threat to int'l stability in 2014 - political analysts," Voice of Russia, http://www.global-sentinel.com/world/3719-europe-mideast-and-central-asia-pose-biggest-threat-to-intl-stability-in-2014-political-analysts)//IS

Situation in the Caucasus will remain stable. Still the Ukrainian turmoil will doubtlessly affect the dynamism of political processes in the region. The intentions of Georgia and Azerbaijan to change their current status quo could become a serious challenge for Russia. However, according to another possible scenario, the new government and the President of Georgia will strengthen ties with their Russian counterparts in economic and security spheres, leaving aside the question of Abkhazia and South Ossetia status. Increasing tensions between Armenia and Azerbaijan may provoke a series of incidents on the Nagorno-Karabakh border. It's extremely unlikely, though, that these local conflicts will turn into large-scale military confrontation.

The activity of terrorist groups of Northern Caucasus will decrease in general, but the attempts of jihadists and the Ukrainian right radical groups to establish alliances will apparently take place.

It should be noted that three pivotal regional players – Iran, Russia, and Turkey – will most probably prevent any destabilizing extremist activity in their own neighborhoods: none of them is interested in breaking the status quo.

**Central Asia is uniquely at risk now**

**Voloshin, 12/3/13** - widely published Russia/CIS expert and consultant collaborating with the Jamestown Foundation and the Central Asia-Caucasus Institute of the John Hopkins University. (Georgiy, "," The Diplomat, thediplomat.com/2013/12/central-asia-dim-security-prospects-ahead/)//IS

Now that Washington no longer views Central Asia as a priority region for its foreign policy, given its ongoing disengagement from Afghanistan, which has consumed much of Washington's attention since the early 2000s, it remains to be seen whether Russia will be capable of assuming full responsibility for the region's security in the post-2014 context. This task actually may be complicated by a number of factors. First among these is Russia's ambiguous relationship with most of the local regimes, which have tended to build their post-independence domestic discourses on the rejection of the Soviet legacy and Moscow's geopolitical domination. Second, there is China's continued absence from Central Asia's security affairs. While China actively pursues interstate cooperation within the Shanghai Cooperation Organization (SCO), this multilateral structure has never been close to becoming, as some earlier predicted, a local equivalent of NATO. In actuality, Beijing still prefers to reap the fruits of its growing economic ties with the region, especially in the energy field, while Russia does the dirty work of training local security forces and worrying about security and stability on the ground.

Third, relations among Central Asians themselves remain tense, thus drastically reducing the opportunity for productive security cooperation in the foreseeable future, even in the face of growing terrorist and extremist threats from the south. Ties are poisoned as much by repetitive border incidents erupting in the unstable Fergana Valley as by unsettled water disputes, beggar-thy-neighbor trade policies (for instance, in the field of natural gas trade) and sometimes personal animosities at the leadership level.

With these three factors combined, Central Asia may now be facing a dim future, much in line with the characterization Zbigniew Brzezinski offered for the region back in 1997, when he famously called it the "Eurasian Balkans."

**Russia doesn't care about Central Asian stability and attempts to stabilize it fail**

**Pannier, 6/15/14** – Bruce Pannier is an RFE/RL correspondent covering events in Central Asia and energy issues. Prior to joining RFE/RL in 1997, Bruce worked at the Open Media Research Institute in Prague. In 1992, he led a sociological project in Central Asia sponsored by the University of Manchester and the Soros Cultural Initiative Foundation. During this time he lived in villages in Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan. (Bruce, "Central Asia: Regionally Dysfunctional In Face Of Common Threats," Radio Free Europe/Radio Liberty, http://www.rferl.org/content/central-asia-threats-roundtable-discusssion/25422873.html) //IS

Russia seems the obvious choice as a guarantor of Central Asia's stability. When the Taliban arrived at Central Asia's borders and the IMU first appeared, the United States and China did not have much of a presence in Central Asia, and nearly all assumed that if the situation deteriorated rapidly Moscow would step in. Russia has bases in Tajikistan and a base in Kyrgyzstan. But Anceschi said if Turkmenistan had to ask for Russian help to quell a security problem, it would only arrive in exchange for Turkmen concessions that would likely alter the form of government in Turkmenistan. Satke also pointed out that when there were widespread ethnic clashes in southern Kyrgyzstan in 2010, Russia did not intervene. So it is unclear what role Russia could play in helping the Central Asian states confront a threat from the south.

**Russia can't stabilize the region – it's on the brink**

**Blank, 5/29/2013** – Expert on the Soviet Bloc for the Strategic Studies Institute (Stephen J. "A New Turn In Russia's Military Policy In Central Asia?" CACI Analyst, http://www.cacianalyst.org/publications/analytical-articles/item/12742-a-new-turn-in-russias-military-policy-in-central-asia?.html)//IS

At a May 8 meeting of the Security Council, President Putin expressed his alarm at future terrorist threats emanating from Afghanistan, expressed his concern that the Afghan army cannot defend the country, thereby exposing Russia and Central Asia to terrorist incursions, and decried the allied failure to stop Taliban and other terrorism and the drug trade. Putin called for a new, clear strategy in Central Asia and Afghanistan. Moscow is now selling helicopters to Afghanistan and Putin's first precept was reinforcing the southern strategic direction's security system. He also urged the utilization of the full arsenal of preventive measures and the potential of the CSTO and SCO, enhanced protection of the Russian state borders, tightening migration policy, accelerated equipping of the CSTO's rapid reaction force with modern equipment, and a stronger campaign to suppress the drug trafficking. Third came intensified programs of economic, humanitarian, and military cooperation with neighbors to stabilize them and presumably further their integration with Russia in trade, energy, economics, and culture. Cynics will argue that this program of action merely conceals a policy to integrate Central Asia and the Caucasus around Russia. But while these are clear goals, the threat assessment is real and well founded. Beyond the Middle Eastern, Caucasus, and Central Asian/Afghan threats, the insurgency in the North Caucasus is still not under control and in 2012 spread, as Russian sources admit, to violence in Kazan and cells in Moscow and St. Petersburg as well as in the Ural-Volga Tatar and Bashkir communities. In light of the Boston bombing and the upcoming showcase Winter Olympics in Sochi, it is not surprising that we see a whole series of military moves taking shape as part of a considered policy package. IMPLICATIONS: This program of action, occurring alongside a military debate as to whether these manifestations of war in the Islamic world are materially changing the nature and character of contemporary conflict, occur under rather inauspicious conditions for the making of this new military policy. Officially the

main threats are NATO and the unvoiced but ever-present Chinese threat, both of which lead to an inordinate emphasis on theater conventional force structures and procurement as well as nuclear deterrence and procurement of nuclear weapons. In this scheme procurement goes in order to nuclear, aerospace, air defense, naval, and lastly Army forces, precisely the opposite of what would be needed to fight any serious contingency in either the Caucasus or Central Asia. Moreover, despite Putin's talk of enhancing multilateral cooperation among CIS members and the regional security organizations, none of those security or defense organizations actually works in Central Asia. Although Moscow and Astana finally agreed upon an air defense scheme or so they say, it remains to be seen how it will operate and in any case it will not save either country from terrorist insurgencies. The CSTO has made clear that it will not intervene in countries to counter purely domestic upheavals, which are nevertheless the most likely manifestations of insurgency or terrorism should they occur. Furthermore, without Uzbekistan, which defected from the CSTO and now stands to receive British and American military assistance, the CSTO's strategic utility is not only untested but already seriously compromised. Lastly Tajikistan's resistance to Russian pressure for a base and flirtation with Washington and NATO further weakens any sign of regional cohesion.

# AT: EXPORTS WON'T HAPPEN

**Exports are feasible- it's just a question of authorization**

**Ebinger et al 5/2/12** (*Charles, a senior fellow and director of the Energy Security Initiative at the Brookings Institution AND **Kevin Massy, Assistant Director of the Energy Security Initiative at Brookings AND ***Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative at Brookings, May 2012, "Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas," Brookings Institute, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502_lng_exports_ebinger.pdf, JHR)

Detailed analysis of the foregoing factors suggests that the exportation of liquefied natural gas from the United States is logistically feasible. Based on current knowledge, the domestic U.S. natural gas resource base is large enough to accommodate the potential increased demand for natural gas from the electricity sector, the industrial sector, the residential and commercial sectors, the transportation sector, and exporters of LNG. Other obstacles to production, including infrastructure, investment, environmental concerns, and human capacity, are likely to be surmountable. Moreover, the current and projected supply and demand fundamentals of the international LNG market are conducive to competitive U.S.-sourced LNG.

# AT: EUROPE

**Can't solve Europe - prices will be too high**

**Doder, 6/26/14** - writer for Voice of Russia (Marko, "No viable alternative to the South Steam pipeline project," Voice of Russia, voiceofrussia.com/us/news/2014_06_27/No-Viable-Alternative-to-The-South-Stream-Pipeline-Project-4351/)//IS

One of the major challenges for the LNG exports to happen is the South Stream pipeline project, as there is simply no sufficient demand to cover both supply sides. In addition, the million dollar question is whether US companies would be able to keep the prices of LNG in Europe low, stay competitive and ultimately achieve profitability. Goldman Sachs analysts believe that LNG exports to Europe would cost around 35-40% percent more in comparison to the Russian gas that is currently selling in Europe. Such a large price differential is primarily driven by high LNG production, transportation and infrastructure costs. Besides the high cost challenge, one should be aware that there are complex bureaucratic procedures from both the US government and European countries that slow down the potential process of exporting LNG to Europe. In particular, the US Department of Energy (DOE) have been criticized in the past years for the slow-process of issuing permits to gas companies, while the EU countries impose high standards that need to be met in order to facilitate the LNG exports. However, the bureaucratic hurdles could possibly be eliminated with the free trade agreement between the US and the EU in place, but until then LNG will likely not be coming to Europe anytime soon.

Finally, the likely outcome of the South Stream project in the following months is that the EU will seek to find a compromise with the Russian side, rather than fall down under the political pressures from Washington. President Vladimir Putin's visit on June 24 to Austria, the country that has a major stake in the project, is a win and a clear step forward for the South Stream project. During his visit, Putin got the approval from the Austrian government for the project to be finished, as the Austrian gas company, OMV, and the Russian Gazprom signed an agreement to build a branch of the South Stream to Austria. Putin's visit to Austria is a huge knockout for the EU officials and American politicians, which slowly closes the door for American gas companies to enter the EU gas market.

# AT: ECON

**Economic benefits are small and studies are flawed**

**Ebringer and Avasarala, 13**– *the director of the Energy Security Initiative at Brookings, which is housed within the institution's Foreign Policy program. Previously, Ebinger served as a senior advisor at the International Resources Group where he advised over 50 governments on various aspects of their energy policies, specializing in institutional and economic restructuring of their utility sectors. ** graduated with a degree in Economics from the University of Mary Washington, researcher for Brookings. (Charles and Govinda, "The Case for U.S. Liquefied Natural Gas Exports" The Brookings Institute, http://www.brookings.edu/research/articles/2013/02/us-lng-exports-ebinger-avasarala) //IS

In addition to the economic benefits of more domestic natural gas production, LNG exports may have additional macroeconomic benefits, including to the balance of payments and foreign exchange. In December 2012 NERA, an economic consultancy, released a report commissioned by DoE modeling the macroeconomic implications of LNG exports under a variety of scenarios. The study found that in each scenario 'the US would experience net economic benefits from increased LNG exports.' To be sure, these are net economic benefits, and certain segments of the population are projected to be adversely affected by LNG exports. Both the benefits and the costs, however, are marginal. Welfare, represented in NERA's report as the amount that households are made better or worse off over the time horizon modeled, is estimated to increase between 0.004 percent and 0.03 percent, depending on the scenario. The greatest achievable net increase in GDP as a result of exports is 0.26 percent of GDP.

Opponents of LNG exports were quick to dismiss NERA's long-awaited report. Mr Liveris of Dow argued that the report 'fails to consider the tremendous competitive advantage that affordable, abundant domestic natural gas offers to the nation'. In an official letter to Secretary Chu, Senator Wyden expressed concern that the model uses 2010 EIA demand data, which do not reflect new forecasts for greater industrial sector natural gas demand. While this is true, the model also uses 2010 supply data, which has been subsequently revised dramatically upward to illustrate the increases in domestic gas production.

**Natural gas exports kill manufacturing – competitiveness**

**MNI News, 6/24/14** – the leading provider of news and intelligence specifically for the Global Foreign Exchange and Fixed Income Markets, providing timely, relevant, and critical insight for market professionals ("Advocates See US Gas Exports Spurring Major Job Growth," MNI News, by the Deutsche-Borse Group, https://mninews.marketnews.com/index.php/advocates-see-us-gas-exports-spurring-major-job-growth?q=content/advocates-see-us-gas-exports-spurring-major-job-growth)//IS

Meanwhile, opponents of expediting the approvals process argue that too many LNG exports would drive up domestic prices from near-record lows that have boosted industrial energy users since the shale boom began in 2008. Higher prices would reduce the competitiveness of U.S. manufacturing, and cut its ability to create jobs, the critics say.

The Industrial Energy Consumers of America, a nonprofit that represents manufacturers, argued that rising natural gas prices will result in declining manufacturing employment. It said 40,000 U.S. manufacturing facilities closed when natural gas prices rose by more than 200% from 2000 to 2008.

IECA President Paul Cicio predicted that Henry Hub gas prices will rise by 89% from current levels by 2025 - faster than the 76% predicted by the U.S. Energy Information Administration - after the EPA's new greenhouse gas regulations and coal-plant shutdowns are taken into consideration.

Cicio told MNI that DOE should continue its current procedure, which he said will show that allowing LNG exports is not in the public interest - the standard by which the department evaluates projects that would export to countries that do not have a free-trade agreement with the United States.

In Australia, domestic natural gas prices have tripled since the country began exporting LNG in 1989, and are expected to rise further next year when more export terminals come on line, according to the IECA.

Cicio declined to say how many jobs might be lost if the government continues to approve applications but argued that there is a negative correlation between natural gas prices and manufacturing jobs.

"When natural gas prices rise, manufacturing jobs fall," he said.

For trade unions, the prospect of more jobs supplying export terminals is clouded by the risk of higher prices.

# AT: RUSSIA

**US exports have no impact on Russian gas**

Cobb 14- Author, speaker, and columnist focusing on energy and the environment. He is a regular contributor to the Energy Voices section of The Christian Science Monitor (Kurt, "Ukraine, Russia, and the non-existent US oil and natural gas 'weapon'"

But what about natural gas? Surely, America's great bounty of natural gas from shale could challenge the Russians. Well, **not really**. It's true that U.S. natural gas production trended up significantly from its post-Katrina nadir in 2005. But the trend has now stalled. U.S. dry natural gas production has been almost flat since January 2012. The EIA reports total production of 24.06 trillion cubic feet (tcf) for 2012 and 24.28 tcf for 2013, a rise of only 0.9 percent year over year. Not mentioned by any of the commentators touting the U.S. natural gas "weapon" is that U.S. natural gas imports for 2013 were about 2.88 tcf or about 11 percent of U.S. consumption. So, let me see if I understand this: The plan seems to be to import more so we can export more. And this would change exactly what in the worldwide supply picture? Certainly, it is true that low U.S. natural gas prices have reduced drilling and exploration dramatically. But prices will likely have to rise above $6 and trend higher as time passes as the easy-to-get shale gas is used up and only the more costly and difficult reservoirs remain. Drillers don't keep drilling unless they can make money and that will require significantly higher prices. And, here's the kicker. In order to ship U.S. natural gas to Europe or Asia, it has to be liquefied at -260 degrees F, shipped on special tankers and then regasified. The cost of doing this is about $6 per thousand cubic feet (mcf). So, the total cost of delivering $6 U.S. natural gas to Europe is around $12 per mcf. With European liquefied natural gas (LNG) prices mostly below this level for the last five years, it's hard to see Europe as a logical market. Japan would be a better target for such exports with prices moving between $15 and $18 per mcf in the last five years. But a U.S. entry into the LNG market could conceivably depress world prices and make even Japan a doubtful destination for U.S. LNG. And, what if U.S. prices rise significantly above $6? But all this presupposes that the United States will have excess natural gas to export. As my colleague Jeffrey Brown has pointed out, "Citi Research [an arm of Citigroup] puts the decline rate for existing U.S. natural gas production at about 24%/year, which would require the industry to replace about 100% of current U.S. natural gas production in four years, just to maintain current production." It seems that U.S. drillers are going to be very, very busy just keeping domestic natural gas production from dipping, let alone expanding it to allow exports. And remember, we are still importing the stuff today! How many companies will actually risk the billions needed to build U.S. natural gas export terminals to liquefy and load exports that may never appear? I doubt that very many will actually go through with their plans. What is truly puzzling is that all the information I've just adduced--except the cost of liquefying, transporting and regasifying natural gas--is available with a few clicks of a mouse and a little arithmetic performed on tables of data. I got the cost information on LNG from a money manager specializing in energy investments. And yet, commentators, reporters, and editorial writers don't even bother to check the internet or call their sources in the investment business. Perhaps the facts have become irrelevant. Only that would explain the current hoopla over the nonexistent U.S. oil and natural gas "weapon" in the face of the all-too-obvious and readily available evidence.

# AT: TPP

## They can't solve in time- LNG exports take more than three years to actually come into effect

**STRATFOR 3/7** (STRATFOR, 3/7/14, "Sample Article: U.S. Natural Gas Will Not Curb Russian Influence," http://www.stratfor.com/sample/analysis/us-natural-gas-will-not-curb-russian-influence)//RTF

Thanks to the ongoing shale gas revolution, the United States will emerge as one of the world's largest natural gas exporters over the next decade. Over the past year, the U.S. Department of Energy has approved approximately 100 billion cubic meters of natural gas exports to countries with which the United States does not have free trade agreements (exports are approved essentially immediately to countries with free trade agreements). However, only one liquefied natural gas export terminal, Sabine Pass LNG in Louisiana, has received environmental approval from the Federal Energy Regulatory Commission to begin construction, with completion expected in late 2015. Expediting environmental approvals for the terminals would accelerate natural gas exports to Europe only minimally, since plant construction is still a laborious process lasting several years. To leverage natural gas for geopolitical impact, Washington would need to compel energy firms to direct exports to or invest in specific countries. LNG export terminals are expensive, so attracting investment in them requires a promise of high returns. Natural gas companies can thus be expected to resist diverting LNG away from the most profitable destinations. For example, the Asian market for LNG is more lucrative for exports than Eastern Europe, where Russia can undercut U.S. prices. Already much of the industry's export capacity has been sold in long-term contracts to Asian buyers. Congress is pushing to expand the expedited approval process to include free trade partners and key allies such as NATO members and Japan. However, with 100 billion cubic meters of export capacity already approved to go to countries without U.S. free trade agreements, this expansion would be irrelevant, since the upper limit of U.S. natural gas exports is likely around 100 billion cubic meters. The United States is also increasing domestic consumption of natural gas, and Washington must balance its domestic needs with its foreign policy objectives. Cheap natural gas is helping to revitalize the U.S. manufacturing sector, and U.S. environmental policy includes replacing coal power plants with more efficient natural gas power plants. These domestic constraints are especially strong because of a lackluster recovery from the 2008-2009 financial crisis and a public that is typically more concerned with domestic issues.

## Domestic politics block

**Solis 13** (Mireya, 6/14/13, Philip Knight Chair in Japan Studies and senior fellow at the Brookings Center for East Asia Policy Studies, "Endgame: Challenges for the United States in finalizing the TPP Negotiations," http://www2.jiia.or.jp/en/pdf/publication/2013-06_004-kokusaimondai.pdf)//RTF

Domestic politics have greatly influenced U.S. negotiation objectives in the TPP and they will also weigh prominently on the ability of the American government to shepherd the talks to a successful conclusion. The connection between domestic politics and trade policy is evident in three main areas: the substance of the U.S. FTA template, the growing politicization of FTA policy as public opinion grows skeptical and partisan disagreements surface, and the Congressional-Executive back and forth over the renewal of trade promotion authority or TPA (whereby Congress lays down a negotiation mandate and agrees to a prompt up or down vote of the trade agreement with no amendments). The negotiation of the North American Trade Agreement (NAFTA) marked an inflection point in American trade politics. As a result of the fractious debate on the merits of signing a trade agreement with a developing country like Mexico, a blue-green coalition of unions and environmentalists has become a mainstay of the political debate on trade agreements (Quiliconi and Wise, 2009). Hence, the incorporation of labor and environmental standards has made steady progress. In the NAFTA renegotiation, these issues were incorporated as side deals, but subsequent trade agreements incorporated these clauses in the main text. The bar on labor and environmental standards was raised with the May 10th agreement in 2007 which stipulated that FTA partners of the United States must protect labor rights endorsed by ILO conventions and sign several multilateral environmental agreements (Barfield, 2007). The American FTA template has also expanded to incorporate more exacting standards in areas such as intellectual property, service liberalization, investment protection, and SOEs in order to respond to the demands of American multinational corporations. In other words, as they seek to cultivate domestic support for trade policy, American officials must demonstrate the value added of trade agreements to American businesses that worry about the trading practices of emerging economies (e.g., indigenous innovation requirements or subsidization of public enterprises) (Solís, 2012). While the U.S. government expands the scope of its trade agreements to be responsive to the demands of specific constituencies, another important trend in U.S. trade politics is the erosion of public support for FTAs. For example, opinion polls show that the percentage of people that believe FTAs benefit the American economy decreased from 50% to 35% between 2001 and 2010; while those that think these trade agreements are detrimental to the economy increased

from 30% to 44% in this period (Pew, 2010). A taskforce of the Council on Foreign Relations attributes the growing public skepticism on the merits of free trade agreements to increasing unemployment, expanding income inequality, and modest wage gains (CFR, 2011). Not surprisingly, the Obama administration -inaugurated in the midst of the global financial crisis- put trade policy on hold for a year fully aware that a jobless recovery did not provide an environment conducive for a proactive trade agenda (Solís, 2011). At the same time, partisan debates on the appropriate scope of trade agreements and the merits of specific FTAs have grown bitter over time. For instance, Democrats and Republicans have articulated different views on the levels of protection required on labor standards and pharmaceutical patents. While Democrats in general have favored stricter rules on labor standards, Republicans have been concerned about their impact on right-to-work legislation (Barfield, 2007). Similarly, Democratic leaders in the Ways and Means Committee have cautioned that the tightening of pharmaceutical patents may hamper access to generic drugs in the developing world, preferring instead to use the provisions of the May 10th agreement in the TPP talks (Inside U.S. Trade, October 7, 2011). Securing Congressional support for the ratification of FTAs has become a more elusive proposition in the aftermath of the divisive NAFTA debate. For instance, Schott and Muir (2012: 50) point out that several agreements have barely received a simple majority vote in the House, and the Central American Free Trade Agreement barely passed by two votes in 2005. The fractious consensus is also palpable in inter-branch negotiations on trade promotion authority. In contrast to continuous authorization of TPA (then known as fast track) between 1975 and 1994, it has only been in effect since then between 2002 and 2007. Hence, the United States has embarked on the negotiation of an extremely complex trade agreement without the assurances of an expedited Congressional vote. While USTR has argued that the TPP negotiations and TPA consultations can move in tandem, Congressional leaders have clearly stated that they expect the administration to secure a negotiating mandate from Congress through TPA (Inside U.S. Trade, March 9, 2012). With a target date of late 2013 for finishing the TPP talks and with the launch of two other major trade initiatives (a WTO plurilateral services agreement and an FTA with the EU), securing TPA has become a much more pressing issue for the second Obama administration. Notwithstanding, the assurances from acting USTR Demetrio Marantis that the administration is ready to draft the TPA bill, some experts expect this will not happen till the TPP talks are nearly finished. Two main considerations seem to weigh in this decision: 1) reaching a consensus on negotiation objectives may be difficult not only due to the need to incorporate new issues (digital commerce and SOEs) but also due to the lack of agreement on the key areas of the May 10th deal –labor, environment, and intellectual property; and 2) such a parallel negotiation with Congressional leaders could hamper the process of securing compromises on the most controversial issues in the TPP talks as they near conclusion (Inside U.S. Trade, January 18, 2013). The downside of such strategy, however, is that the delay in obtaining TPA is in fact affecting the evolution of the negotiations. As explained by Senator Rob Portman (former USTR under George W. Bush), without TPA: "other countries are not willing to put their last and best offer on the table" (Inside U.S. Trade, February 15, 2013). As the analysis above shows, domestic politics have played a large role in shaping the American trade agenda, influencing the pace of the TPP talks, and impacting the chances of ratification of the finished agreement.

# AT: WARMING

**Exports actually increase emissions and aff studies are flawed**

**Mufson, 6/09/14** – chief economic policy writer, Beijing correspondent, diplomatic correspondent and deputy editor of the weekly Outlook section of the Washington Post. Earlier, he spent six years working for The Wall Street Journal in New York, London and Johannesburg and wrote a book about the 1980s uprisings in South Africa's black townships (Steven, "Exporting U.S. natural gas isn't as "clean" as you think," The Washington Post, http://www.washingtonpost.com/blogs/wonkblog/wp/2014/06/09/exporting-u-s-natural-gas-isnt-as-clean-as-you-think/)//IS

One of the rallying cries in favor of liquefying and exporting U.S. natural gas has been to help reduce greenhouse gases in other countries, by crowding out coal in Asia and Europe.

Yet tucked into an Energy Department report on LNG exports is a different view: That U.S. exports of LNG to China could end up being worse from a greenhouse gas perspective than if China simply built a new power plant and burned its own coal supplies. The report also says that the climate benefits of exporting LNG to other countries are modest.

The report is titled "Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States."

It says the benefits of cleaner, more efficient combustion of natural gas are largely offset by methane leakage in U.S. production and pipelines and by methane leaks and energy used in the process of liquefying and transporting the LNG. In the case of shipping LNG from the U.S. gulf coast to Shanghai, the greenhouse gas benefits could in some cases be completely offset by those factors when measured over a 20-year period, the report says.

The Energy Department report was released May 30 when the department announced that it would no longer issue preliminary approvals for LNG export permits that are needed for shipments to countries without free trade agreements with the United States.

Critics of LNG exports say that the report buttresses their arguments. Mike Tidwell, director of the Chesapeake Climate Action, which is trying to block a Dominion Resources-owned LNG export terminal in Cove Point, Md., said that the report would cast LNG exports in an even worse light if it used what he called more realistic leakage estimates for U.S. production and pipeline transportation.

"If their analysis is overlaid with more realistic foreign and domestic leakage assumptions, it becomes clear that the immediate climate impacts of LNG would be much worse for the climate than coal if exports began today," he said.

Bill Gibbons, an Energy Department spokesman, pointed to the report's conclusion, which did not highlight any harm from a climate standpoint. But the conclusion also does not assert substantial benefits.

It says "that the use of U.S. LNG exports for power production in European and Asian markets will not increase GHG emissions, on a life cycle perspective, when compared to regional coal extraction and consumption for power production." It added that "no significant increase or decrease in net climate impact is anticipated from any of these scenarios."

The report's China scenario assumes a U.S. natural gas methane leakage rate of 1.6 percent. It measures LNG exports that would travel from New Orleans to Shanghai. It assumes that if China relied on coal instead, that it would build a new, relatively efficient coal plant that burned with a 36.7 percent efficiency rate. It also assumes that the gas would be delivered to a power plant near an import terminal, minimizing leakage there.

Methane is a potent greenhouse gas, 85 times as potent as carbon dioxide when measured over 20 years and 30 times more potent over the 100-year time frame often used by climate change experts. The Energy Department report gave estimates under both.

The result: A range of outcomes over 20 years that would on average save about 25 percent of greenhouse gas emissions from local coal but which could in other cases produce more.
Gibbons says that **the report used conservative estimates**. He said the 1.6 percent leakage rate was higher than the expected 1.4 percent level, a median EPA figure; Tidwell said it is only a fraction of the actual leakage rate. Gibbons says the report assumes efficient coal burning plants, yet China experts say those levels of efficiency are typical of new plants there.
James McGarry, who works with Tidwell at the Chesapeake Climate Action Network, says that the Energy Department report also underestimates leakage in importing countries by assuming delivery to a power plant near LNG import facilities. He notes that India, a customer of the Cove Point terminal, uses only 44 percent of its natural gas for power generation and uses 25 percent for its fertilizer industry, creating new chances for leakage.
This debate isn't new, and the Energy Department was relying on earlier studies by the National Energy Technology Laboratory.
"The process of liquefaction, transport, and regasification of LNG is highly emissions-intensive, increasing by 15 percent the total life cycle GHG emissions associated with exported U.S. natural gas," James Bradbury, senior associate of the climate and energy program at the World Resources Institute, said in congressional testimony on May 7, 2013. "These added upstream emissions also significantly reduce the relative advantage that natural gas would have over higher-emitting fuels, like coal and oil."
In July 2013, the American Petroleum Institute published a report by the LEVON Group that said that LNG emissions "are due to fugitive emissions from station operations, along with venting and fugitive emissions from operating LNG compressors and engines." It spelled out areas for improvement.
Tidwell also points to energy needs of the LNG plants. He notes that at Cove Point, Dominion is seeking to build a 130 megawatt plant to chill the natural gas to 270 degrees below zero — the temperature at which it becomes liquid and can be pumped onto tankers.
Proponents of LNG exports also say that leakage will shrink as a result of industry efforts and Environmental Protection Agency guidelines for capturing methane at fracking sites.
A paper by Cornell University's Robert Howarth based on existing studies said the leakage rate could be as high as 6 percent. Stanford University's Adam Brandt led a review of existing studies and said that actual gas emissions are 50 percent higher than EPA's estimate.
The Environmental Defense Fund is conducting 16 studies with nine companies of the natural gas supply chain to get more precise figures, including ones for widespread hydraulic fracturing techniques for tapping shale gas.
"It is fair to ask the question: 'What are the methane emissions associated with the gas being produced and distributed?'," said Mark Brownstein, chief counsel of the climate and energy program at the Environmental Defense Fund. "To acknowledge that those emissions exist isn't the end of the story. The end of the story is when you take steps to reduce or eliminate those emissions and I think that's where the focus needs to be. Whether we're keeping the gas at home or sending abroad the goal is the same."
But Tidwell argues that the leakage figures on LNG show that at least one area of development is undermined by climate issues.
"They're putting together a best case scenario and still you get worse than regional coal over 20 years," he said. "If you take anything other than this rosy scenario you get significantly worse than coal over 20 years. The whole clean gas argument for shipping it to our friends falls apart. This is the first official quantification of the realistic weakness of part of their core argument."

**Exports supercharge warming impacts**
**Cushman, 6/12/14** – writer and editor in Washington, D.C. since 1978, principally with the Washington bureau of The New York Times. He has written extensively about energy, the

environment, industry and military affairs, also covering financial and transportation beats, and editing articles across the full spectrum of national and international policy. Among his beat assignments at The Times, he covered climate and the environment during the Clinton administration. He served on the board of governors of the National Press Club and was its president in the year 2000. He has taught brief courses in media and environmental law at the Vermont Law School. He retired from The Times in 2013 after 27 years and is working on a book of environmental history. (John, "U.S. Natural Gas Exports No Better for Climate Than China's Coal, Experts Say," Carbon Copy, http://insideclimatenews.org/carbon-copy/20140612/us-natural-gas-exports-no-better-climate-china%E2%80%99s-coal-experts-say)//IS

As the Obama administration inches toward a major expansion of natural gas exports, one of the thorniest questions is how that growth will affect greenhouse gas emissions, possibly worsening the problem of global warming.

Although gas contains less carbon than other fossil fuels, it emits more methane, a much more potent greenhouse gas than CO2 in the short term. Methane leaks into the atmosphere from gas production wells, and from the pipelines that deliver the gas to export terminals. Then you have to count CO2 emissions from the significant amount of energy needed to liquefy the gas so it can be shipped abroad. Finally, exports would likely boost natural gas prices—and that could encourage burning dirtier coal instead.

Quantifying all this pollution is enormously complicated, and attempts to do so can lead to some surprising results, as shown by a new study from the Department of Energy's National Energy Technology Laboratory. It reached the startling finding that in terms of global greenhouse gas emissions, for China to buy liquefied natural gas (LNG) from the United States might be no cleaner than for China to keep on burning its own coal. The study's conclusions are discussed in detail by Joe Romm of Climate Progress here, and by Steve Mufson of the Washington Post here.

The national lab's finding is important, because as China struggles to shift away from coal in the face of soaring pollution, imported LNG is seen as "an important part of the solution," as the authoritative International Energy Agency put it this week. The IEA predicts China will nearly double its use of gas in the next five years. That would make it a major market for LNG from the United States, assuming that the Energy Department approves a significant number of the new export terminals it currently has under consideration.

Environmental groups who oppose that expansion say the greenhouse gas picture is even worse than the national lab's study suggests.

"We believe that the implementation of a massive LNG export plan would lock in place infrastructure and economic dynamics that will make it almost impossible for the world to avoid catastrophic climate change," said a coalition of 16 environmental groups opposing one proposed export terminal, the $3.8 billion Cove Point facility in Lusby, Maryland.

In a March 18 letter to President Obama, they urged him to order the Federal Energy Regulatory Commission (FERC) to conduct a full environmental impact statement for the project, rather than accept the less comprehensive assessment that the agency has deemed sufficient.

According to Daniel Weiss of the Center for American Progress, the Obama administration has already conditionally approved enough new export terminals to handle nearly one fifth of the nation's projected natural gas production in 2020. By then, exports are expected to have grown 14-fold, with another quadrupling expected by 2030.

"Ignoring the potential increase in methane pollution from future LNG exports won't make climate change go away—it will only make its impacts more deadly, destructive and expensive," he said at a recent Congressional hearing.

# POLITICS DA

# OFFSHORE DRILLING LINKS

**Offshore drilling destroys Obama's political capital**

Broder 10 (John, writer for the New York Times, 3/31/10, "Obama to Open Offshore Areas to Oil Drilling for First Time," New York Times http://www.nytimes.com/2010/03/31/science/earth/31energy.html?_r=0, JHR)

But while Mr. Obama has staked out middle ground on other environmental matters — supporting nuclear power, for example — the sheer breadth of the offshore drilling decision will take some of his supporters aback. And it is no sure thing that it will win support for a climate bill from undecided senators close to the oil industry, like Lisa Murkowski, Republican of Alaska, or Mary L. Landrieu, Democrat of Louisiana. The Senate is expected to take up a climate bill in the next few weeks — the last chance to enact such legislation before midterm election concerns take over. Mr. Obama and his allies in the Senate **have already made significant concessions on coal and nuclear power** to try to win votes from Republicans and moderate Democrats. The new plan now grants one of the biggest items on the oil industry's wish list — access to vast areas of the Outer Continental Shelf for drilling. But even as Mr. Obama curries favors with pro-drilling interests, **he risks a backlash from some coastal governors, senators and environmental advocates**, who say that the relatively small amounts of oil to be gained in the offshore areas are **not worth the environmental risks.**

**Offshore drilling is unpopular- empirics prove**

**Wilson Center 13** (12/10/13, "Opportunities and Challenges For Arctic Oil and Gas Development," Woodrow Wilson International Center for Scholars, http://www.wilsoncenter.org/sites/default/files/Artic%20Report_F2.pdf, JHR)

In 1968, ARCO and Standard Oil drilled a well that tapped the largest oil field in North America, the Prudhoe Bay field on Alaska's North Slope. Production began in 1977 after the completion of the Trans-Alaska Pipeline System (TAPS) from Prudhoe Bay to Valdez, Alaska. Over time, companies including Shell in the 1980s, and BP in 2012 at its Liberty oil field in the Beaufort Sea, have successfully found oil; yet each has failed to extract the resource and abandoned the projects due to excessively high production costs. A debate recently has emerged between federal authorities and local Alaska legislators over allowing drilling in the National Petroleum Reserve in Alaska (NPR-A). Alaskans generally favor extensive resource development in the 23.5 million acre reserve, but the sentiment is not the same at the national level; the Obama administration approved only a limited drilling plan in the NPR-A. There is now concern that drilling in the NPR-A will become as politically charged as the debate over resource development in the 19.3 million acre Arctic National Wildlife Refuge (ANWR), where a Congressional moratorium has banned drilling since 1982.

# LEASING UNPOPULAR

**Natural gas leasing is empirically unpopular- Idaho proves**

**Barker 14** (Rocky, energy and environment reporter for the Idaho Statesman and has been writing about the West since 1985

Read more here: http://blogs.idahostatesman.com/idaho-lands-holds-auction-for-natural-gas-leases-attracts-peaceful-protesters/#storylink=cpy

4/17/14, "**Idaho Lands auctions oil and natural gas leases, attracts peaceful protesters,**" Idaho Statesman, http://blogs.idahostatesman.com/idaho-lands-holds-auction-for-natural-gas-leases-attracts-peaceful-protesters/, JHR)

Protesters joined natural gas exploration company executives at an auction Thursday of oil and gas leases at the Idaho Department of Lands office in Boise.¶ Two companies – Trendwell West, a Michigan firm with a well already drilled in Canyon County, and AM Idaho, which controls the natural gas wells in Payette County nearly ready for production – bid on 150 tracts in Ada, Canyon, Gem, Owyhee, Payette, and Washington counties.

**Massive controversy on natural gas – requires PC to overcome deadlock**

**Patrick 12—**researcher for the Congressional Research Service(Stewart, 1/18/12, "Americans on Renewable Energy," http://blogs.cfr.org/patrick/2012/01/18/americans-on-renewable-energy/)//JQ

Controversy has erupted over natural gas, with both sides spewing legitimate and fabricated concerns. But last August, the Natural Gas Subcommittee of the Secretary of Energy Advisory Board published a "compromise" report, which as my colleague Michael Levi describes, could serve as a basis for a future middle-ground path that incorporates natural gas, "if sensible people on all sides look past the fact that they don't like everything in the report." With the nation's politicians deadlocked on so many issues, I'm not optimistic that natural gas will miraculously inspire cooperation.

# NAT GAS UNPOPULAR

## Plan wrecks capital

**Dicker 12**—Senior Columnist at The Street(Daniel, 9/4/12,"Why Isn't Natural Gas an Election Issue?" http://www.thestreet.com/story/11684440/1/why-isnt-natural-gas-an-election-issue.html?cm_ven=GOOGLEN)//JQ

Why has this opportunity towards increased reliance on natural gas been so obvious and yet so difficult for politicians of both parties to embrace?¶ It hasn't been solely because 2012 is an election year. Boone Pickens was on CNBC last week marking the fourth anniversary of his "Pickens Plan," the failed congressional effort to invest in truck natural gas engines and fuelling infrastructure to run them on.¶ In fact, if anyone wanted to see political partisanship in action slowing the real economic progress this nation could make, they'd find no better example than the history of the Pickens plan and other natural gas initiatives in Washington.¶ Both radical wings of each party have made advocating natural gas use impossible. Democratic environmentalists are concerned about hydraulic fracturing and its possible impact to aquifers. Republicans are reluctant to approve further federal spending of any kind as well as risk a charge of "picking winners" in natural gas -- a charge they have made successfully against Democrats.¶ Of course, both radical wings of both parties are wrong: Overwhelming evidence from every independent research source has concluded that hydraulic fracturing of shale for natural gas has proven to be safe to our water supplies and is getting safer all the time.¶ Republican reticence to support natural gas expansion belies a long history of government incentives for developing new energy sources, from as far back as our development of coal to our much discussed modern tax incentives for crude oil exploration and production.¶ It is a fact that our government has been picking winners in energy for as long as there's been government.¶ The advantages of natural gas conversion and greater use are obvious but bear repeating. Natural gas is a domestic source of energy and promises energy independence here in the U.S. Production, transport and building of infrastructure for natural gas would mean millions of new jobs. Natural gas prices are literally half that of competing oil and gasoline. Finally, carbon emissions for natural gas are about a third that for coal and other fossil fuels.¶ What's not to like?¶ But it seems both radical wings of each party continue to wield enormous influence. Neither candidate has made natural gas a cornerstone of a new and necessary energy policy.

## The plan's controversial---makes Obama seem in bed with natural gas

**Berman 12**—a writer at Politico(Dan, 5/16/12, "When it comes to natural gas, Obama can't win," http://www.politico.com/news/stories/0512/76402.html)//JQ

President Barack Obama talked up natural gas in his State of the Union address, his top aides have held dozens of meetings with natural gas industry leaders and his administration has given the industry what it wanted on two big regulatory issues.¶ What he's gotten in return: a giant headache.¶ Industry backers have hammered away at virtually all of the White House's rule-making efforts while pouring millions of dollars into campaigns fighting Obama's reelection.¶ At the same time, environmentalists and even some Republicans have complained that natural gas is too cozy with the White House.¶ The gas industry's had plenty of access. This year, the White House Office of Management and Budget held at least a dozen meetings on fracking with senior officials from companies like ExxonMobil, Anadarko and BP, as well as Republican congressional staffers, tribal leaders and industry lobby shops.¶ But the White House seems unable to decide how close it wants to be to the industry. Obama and Cabinet officials like Energy Secretary Steven Chu, Interior Secretary Ken Salazar and EPA chief Lisa Jackson consistently praise natural gas. And recent headlines have trumpeted the newfound closeness; Bloomberg, for instance, went with "Obama Warms to Energy Industry by Supporting Natural Gas" while National Journal chose: "White House's Coziness With Big Oil Irks GOP."¶ White House energy adviser Heather Zichal insisted Monday that the relationship isn't that simple.¶ "It's safe to say the notion that we rolled out the welcome mat or have this hunky-dory relationship where we're all holding hands and singing 'Kumbaya' is not exactly where we're at today," Zichal said at an American Petroleum Institute event.¶ "What I can say is that we were in the middle of working on a number of regulations that directly impact the oil and gas industry," she added. "There was no way for us to finalize a regulation that made sense without us actually engaging with the industry."¶ The past several weeks have demonstrated the love-hate relationship with industry.¶ On April 13, Obama signed an executive order meant to coordinate the administration's activities on natural gas and perhaps answer criticism that the administration is trying to end hydraulic fracturing. Industry lobbyists met that afternoon with Zichal.¶ The White House press office even blasted out a release quoting supportive statements from places like the American Petroleum Institute, Business Roundtable and Dow Chemical.¶ But when the EPA and Interior Department each rolled out their much-anticipated rules regarding fracking, they were hammered by the industry and its GOP allies. And when Sen. Jim Inhofe (R-Okla.) started a media blitz using a two-year-old video of a regional EPA administrator saying he wanted to "crucify" law-breaking oil and gas companies, some of the same groups that had praised the executive order called for the person to be fired (he stepped down within five days).¶ Making things worse for the White House, environmentalists who are happy the agencies were tackling fracking in the first place complained that the rules were watered down.¶ "I agree it seems like they're trying to somehow make the industry happy, but we think that the White House absolutely should be holding the industry to a much higher standard," said Amy Mall of the Natural Resources Defense Council. "We know the industry can operate with cleaner and safer methods."

## Empirics prove the plan's controversial

**Barnes 12**—contributor to the post-gazette (Tom, 3/29/12, "Natural gas extraction tax debated in House," http://www.post-gazette.com/stories/local/state/natural-gas-extraction-tax-debated-in-house-265999/?print=1)//JQ

HARRISBURG -- House Democrats and Republicans wrangled for five hours Tuesday in a bitter partisan debate over whether to enact a hefty

new tax on extracting natural gas from Marcellus Shale, but the issue still has a long way to go.¶ Democrats favored the measure, called Senate Bill 1155, while Republicans were generally opposed. It would impose a severance tax of 39 cents per thousand cubic feet (MCF) of natural gas extracted from the vast areas of underground shale in Pennsylvania. It would generate $120 million this fiscal year, $326 million next year, $408 million in 2012 and $495 million in 2013.¶ But even the supporters said the bill was just "a first step," with difficult negotiations expected with the Republican-controlled Senate. Many senators favor a lower tax rate, like one in Arkansas, which has a 1.5 percent tax on the market value of the extracted gas for the first several years.¶ The rhetoric over the bill was loud from both sides. "It's unconscionable that these gas drillers don't pay a severance tax," said Rep. Greg Vitali, D-Delaware, adding that all other 24 states with Marcellus drilling have a tax.¶ "These [gas] people are making tons of money, billions in gross profits," he said. "They hired a former Pennsylvania governor for $900,000 [as a lobbyist]. They gave a [Republican] candidate for governor nearly $400,000. A rate of 39 cents per MCF is fair and reasonable. They can afford it."¶ Rep. Barbara McIlvaine Smith, D-Chester, said, "We are the only shale state without a shale tax. People must think we have a big S on our forehead -- for stupid."¶ Rep. Bryan Lentz, D-Delaware, added, "If this tax is defeated, the headlines will read 'Corporations Win, People Lose.' If you vote against this bill you are doing the bidding of the gas industry, which can and should pay its fair share."¶ Republicans strongly disagreed, claiming such a high tax will stifle the drilling industry as it gets going in the state, providing thousands of jobs and other types of taxes to the state and localities where drilling is going on.¶ GOP legislators also objected that the bill was unconstitutional, because House Democrats on Monday had taken a measure on a different subject, which the Senate had already passed, and added totally new tax language to it. Republicans said that legally, revenue-raising bills must start in the House, not the Senate.¶ Republicans also objected that the rewritten bill provides $97 million -- 80 percent of the $120 million expected from the tax in the first year -- to fill a state budget hole, rather than helping replenish the nearly bankrupt Environmental Stewardship Fund, which protects farmland and open space.¶ "People are fed up with higher taxes," Rep. Scott Hutchinson, R-Venango said. "There's a firestorm sweeping across the nation and state. People don't want us to use this money to feed the Leviathan called state government."¶ "To come in with the highest tax rate in the country is unbelievable," said Rep. Daryl Metcalfe, R-Cranberry. "It will kill jobs in Pennsylvania."¶ Rep. Matt Baker, R-Tioga, said, "Like sharks in a feeding frenzy, big state government preys on drillers and landowners. It will impede job creation. This is the wrong way to go. It's a monumental tax, the largest in the whole country."¶ Rep. Dan Frankel, D-Squirrel Hill, insisted that contrary to what opponents said, states like Wyoming, Oklahoma, New Mexico and Montana have higher gas taxes than what this bill contains.¶ Other Democrats said that while the 39 cents per MCF may be the highest rate in the country, other taxes on drillers in Pennsylvania, such as income and property taxes, are lower, so the overall tax isn't the highest in the U.S.¶ Initially, 60 percent of the shale-tax revenue was to go to the state general fund and 40 percent was to be split several ways, including going to county and local governments, environmental improvements and the hazardous sites cleanup fund. But under an amendment by Rep. Kate Harper, R-Montgomery, that passed Tuesday night, those percentages were reversed, with 40 percent going to the state. She said the original version of the bill didn't provide enough for local government or the Environmental Stewardship Fund in the first year.¶ Everyone agreed that the bill is far from the final word on the subject of a shale gas tax. Erik Arneson, an aide to Senate Republican leader Dominic Pileggi, said the 39 cents per MCF "is not an approach that would win majority support in the Senate."¶ But Democrats said Tuesday night's affirmative vote on the amendment at least keeps the process moving forward, with upcoming talks aimed at producing a bill that can pass both chambers and be signed by Gov. Ed Rendell before legislators go home in mid-October.

# REGULATIONS UNPOPULAR

### Energy restrictions debate spurs gridlock and requires PC

**Whatley 12**—the EVP of Consumer Energy Alliance(Michael, 10/30/12, Energy in the "Next Four (Political) Years", http://www.rigzone.com/news/article.asp?hpf=1&a_id=121729)//JQ

Should Republicans hold the House, and Democrats hold the Senate, it will make it exceedingly difficult for any meaningful energy legislation to pass in the next two years, regardless of who wins the Presidency. Smaller legislative measures, including requisite funding for federal agencies, are likely, but a bipartisan movement to pass a comprehensive energy package is unlikely. For the Obama administration, partisan gridlock in Congress would require the President to push his energy agenda through regulation. Potential items of his docket include efforts to expand federal regulation over hydraulic fracturing and to create new incentives or mandates for alternative fuel consumption, such as a low carbon fuel standard. For a Romney administration, any substantive changes to our current regulatory structure, especially as it relates to public lands, would require Congressional approval, something that a bitterly divided Congress will be loath to provide. Similarly, incentives for renewable energy programs and tax credits would be up to the discretion of the Congress and its budgeting process. However, a Romney administration would likely expand leasing opportunities in the federal offshore and public lands for oil and natural gas development.

### Debate over regulation trigger ideological dispute and saps PC even if there is bipartisanship

**McEntee 12**—Executive Director and CEO of the American Geophysical Union(Christine, 8/15/12, "National Journal Experts Blog", http://energy.nationaljournal.com/2012/08/finding-the-sweet-spot-biparti.php?comments=expandall#comments)//JQ

As convenient as it would be to say that a single change could alleviate the gridlock we are experiencing, the reality is that there are a number of critical obstacles keeping us from passing energy and environmental legislation.¶ We know that objective scientific knowledge is needed to inform good policy decisions – and that objective knowledge exists – but all too often we are allowing politics and ideology to take precedence over, or be pitted against, science. This not only risks the legitimacy of the science, but also the strength of the policy and its ability to protect the security, health and welfare of the American people, and support a healthy and thriving economy. The current rhetoric on climate change is a perfect example.¶ We also know that the biggest obstacles to passage of energy and environmental legislation are disagreements about the extent to which the federal government can and should regulate business, and reluctance to launch new initiatives that will add to the deficit. The science tells us that small initiatives that require only nominal investments can't begin to address the environmental and energy challenges we face; and legislation big enough to achieve significant results will cost more than Congress is willing to spend.¶ Environmental legislation is also held prisoner to partisan gridlock, with far less bipartisan support than many energy proposals. Even environmental legislation that saves many times its cost in medical and health care savings cannot advance in the current Congress. One recent example is the defeat of legislation to limit the release of airborne particulates proven to adversely affect the respiratory health of children and seniors.¶ Dissonance about the role of federal regulation, its cost-effectiveness, and potential to impose costs on private sector that might adversely impact economic recovery further complicate energy/environmental legislative calculus. For these reasons, it is difficult for Congress to pass new energy and/or environmental initiatives, even where there is wide bipartisan support for a given bill.

# LINK MAGNIFIERS

**Everyone will hear about nat gas- huge controversy and angers the natural gas industry, manufacturing, and environmentalists.**

**Levi 12**— PhD in war studies from the University of London, Council on Foreign Relations Energy and the Environment senior fellow, Program on Energy Security and Climate Change director, (Michael, June 2012, "A Strategy for U.S. Natural Gas Exports," www.brookings.edu/~/media/research/files/papers/2012/6/13%20exports%20levi/06_exports_levi.pdf)//JQ

A revolution in U.S. natural gas production has forced policymakers to decide whether they should allow exports of LNG from the United States. They should say yes, within prudent limits, and leverage U.S. exports for broader gain. Yet the mere fact that the benefits of allowing exports would outweigh the costs does not mean that the political fight over allowing LNG exports will be tame. Operators of natural gas power plants will likely oppose exports, as will energy intensive manufacturers, though chemicals producers, if they are sufficiently enlightened, may take a more moderate stance. Most environmental advocates who are concerned with the local impacts of shale gas development will likely join in opposition, as will those who are convinced that gas should be trapped for use in cars and trucks, and those who believe that any rise in consumer energy prices is unacceptable. The most prominent proponents of exports will likely be oil and gas companies and advocates of liberal trade, perhaps along with a broader group of foreign policy strategists that finds the prospect of disrupting relations between gas-producing and gas-consuming countries appealing, as well as supporters of renewable power who see cheap natural gas as competition (Schrag 2012). Any decision on LNG exports is likely to be controversial. Enlightened leadership and a strategy that mitigates downsides for poorer consumers and the local environment are essential to a smart strategy for constructively moving exports forward.

**They specifically hate LNG exports.**

**Ratner et al 11**— Analyst in Energy Policy, Specialist in Energy and Infrastructure Policy, Analyst in Environmental Policy(Michael, Paul Parfomak, Linda Luther, 11/4/11 "US Natural Gas Exports: New Opportunities, Uncertain Outcomes," assets.opencrs.com/rpts/R42074_20111104.pdf)//JQ

Other issues have also been raised regarding natural gas exports. Environmental groups are split ¶ on the desirability of greater use of natural gas at home and abroad. Advocates see it as ¶ decreasing emissions compared to other hydrocarbons, whereas opponents point out that natural gas still emits carbon dioxide and other pollutants. Concerns about contamination of water ¶ supplies during gas production have been raised because of the use of hydraulic fracturing ¶ ("fracking"), the technique for extracting shale gas which uses water, sand, and chemicals to ¶ create fissures in shale, allowing the trapped natural gas to be cost-effectively extracted.¶ 2¶ Other ¶ groups want to see greater use of natural gas in the U.S. economy before it is exported overseas ¶ for economic and national security concerns.

**Agency action can't shield congressional controversy over gas exports**
**Burnes et al, 12**

JOHN BURNES, MICHAEL MCBRIDE, JANNA CHESNO, Van Ness Feldman, Van Ness Feldman maintains one of the most active and prominent LNG practices in the U.S. Our practice includes the review and negotiation of LNG sale, purchase, and tolling agreements, and due diligence reviews of proposed projects and contracts for financing LNG facilities. Our team has first-hand experience in obtaining LNG-related permits from DOE and the needed authorizations to construct and operate LNG terminals and related pipeline facilities from FERC. Further, Van Ness Feldman professionals have worked on every piece of federal energy legislation over the last two decades. In addition to our representation of existing U.S. pipelines and LNG terminal owners, our team includes members who litigated the Trunkline LNG Project before FERC and DOE where the issue of DOE's revocation authority arose for the first time, and members with first-hand experience in developing the statutory language of Energy Policy Act of 2005, which facilitated the development of LNG import terminals in the U.S. For more information, please contact John Burnes, Janna Chesno, Lisa Epifani, Michael McBride, or any member of our LNG practice at 202.298.1800., January 23, 2012, http://www.vnf.com/news-policyupdates-669.html)

Some clarity may be provided by DOE in response to Congressman Markey's questions concerning DOE's regulatory authority and intentions. The second "cumulative impacts" study, which should be completed in the first quarter, may also provide additional

information on DOE's grounds for taking action in the future. Following review of the completed studies, DOE will act on the pending LNG export applications, and may provide needed definition to its retroactive authority announced in the Sabine Pass condition. Congressional action, including possible hearings on the domestic impact of increased LNG exports and DOE's authority, is also likely in 2012. Parties seeking to obtain or provide financing of LNG export projects, as well as upstream natural gas pipelines that could deliver gas to the proposed LNG export terminals, will want to thoroughly understand the potential risks and consequences of DOE's claimed authority to amend, suspend, or revoke existing export authorizations. Interested parties should also recognize that there are opportunities to protect their interests by participating in the regulatory process before both DOE and FERC for the approval of LNG export projects. There may also be opportunities to participate in the likely Congressional debate concerning the impacts of increased LNG exports.

# OTHER DA LINKS

# OIL LINK

**Natural gas exports decrease prices instantly – it's a link of perception**

**Furchrogott-Roth, 4/4/14** – is former chief economist of the U.S. Department of Labor, senior fellow at the Manhattan Institute for Policy Research. From 2003 to 2005, Ms. Furchtgott-Roth was chief economist of the U.S. Department of Labor. From 2001 to 2002 she served as chief of staff of President George W. Bush's Council of Economic Advisers. Ms. Furchtgott-Roth served as deputy executive director of the Domestic Policy Council and associate director of the Office of Policy Planning in the White House under President George H.W. Bush from 1991 to 1993, and she was an economist on the staff of President Reagan's Council of Economic Advisers from 1986 to 1987. (Diana, "Opponents of natural-gas exports have it all wrong," Wall Street Journal's MarketWatch, http://www.marketwatch.com/story/opponents-of-natural-gas-exports-have-it-all-wrong-2014-04-04?pagenumber=1) //IS

Myth 2: Actions today won't increase exports until it is too late. There is no point in exporting natural gas, according to naysayers, because we do not have the infrastructure in place. To export gas, we need more pipelines to get gas to shipping terminals as well as more shipping terminals. That could take as much as five years.

However, that disregards the role of expectations. Announcements about our intentions to build infrastructure to export send signals to futures markets, which affect prices today. Russian President Vladimir Putin is watching our intentions carefully.

Lucian Pugliaresi, president of the Energy Policy Research Foundation, told me: "If we increase exports, we can open up the opportunity to shift long-term expectations on domestic supply and receive the benefits of lower prices even before the supplies come to market."

That can be seen by the speed with which events influence current prices. When war breaks out in the Middle East, or a hurricane is forecast to blow through the Gulf states, or when a refinery is shut down due to an accident, prices climb on the news — even though supply has not changed. Prices climb not only due to the disruption in supply, but also due to expected disruption in supply, and to a change in futures prices.

It works in the opposite direction, too. An announcement that oil will be released from the Strategic Petroleum Reserve sends prices down before they are released. Futures prices change, affecting current prices.

# COUNTERPLANS

# CALIFORNIA CP

# 1NC CALIFORNIA CP

**California has the capabilities to do the aff**

**NGEF Committee 11** (South Carolina Legislature, 9/11/09, Report to the South Carolina General Assembly, "The South Carolina Natural Gas Exploration Feasibility Study Committee," http://www.scstatehouse.gov/archives/committeeinfo/NGEFStudyCommittee/NGEFSC_Report_Published.pdf, JHR)

Notwithstanding the above circumstances, and in light of the data presented to the South Carolina Natural Gas Exploration Feasibility Study Committee, it is our opinion that, pending the satisfactory disposition of the following issues: • execution of a 5-year plan by MMS that includes natural gas exploration off the SC coast,• protection of natural resources and quality of life issues, including attention to the concerns inherent in hurricane activity and the potential development of the companion industries of oil and gas, • protection of tourism interests,• execution of state energy policy in a manner that maximizes the benefit of the entire portfolio of energy resources, • an acceptable royalty revenue sharing agreement, and• market factors associated with the financial risk of exploration, the state of South Carolina should consider the development of an offshore natural gas industry. At the appropriate time, we recommend that the General Assembly pursue any legislation that would be productive of these ends.

# CONSULT NATIVES

# 1NC CONSULT NATIVES CP

**Indigenous groups should be considered in federal offshore natural gas decisions- we actually have a solvency advocate**

**Ebinger et al 14** (*Charles, senior fellow and director of the Energy Security Initiative at Brooking, former adjunct professor in energy economics at John Hopkins and Georgetown, AND **John Banks, nonresident senior fellow at the Energy Security Initiative at Brookings, current adjunct professor in energy economics at John Hopkins AND ***Alisa Schackmann, senior research assistant
in the Energy Security Initiative at Brookings ,March 2014,"Offshore Oil and Gas Governance in the Arctic A Leadership Role for the U.S.," Energy Security Initiative at Brookings,
http://www.brookings.edu/~/media/Research/Files/Reports/2014/03/offshore%20oil%20gas%20governance%20arctic/Offshore%20Oil%20and%20Gas%20Governance%20web.pdf, JHR)

It is critical to involve indigenous groups in decisions concerning offshore oil and gas activities, including the development and implementation of governance instruments. There is broad acceptance of the critical importance of dialogue and public consultation with local communities. This view is shared by governments and the oil industry. There is also growing awareness that indigenous input into the development of standards is necessary to leverage traditional knowledge. This can have an impact on a range of regulatory issues such as area and seasonal drilling and seismic testing, and their interaction with marine mammal activity.

**Natives have critical knowledge that's key to actual policy effectiveness**

**Hayes 13** (David, Deputy Secretary of the Interior, March 2013, "Managing for the Future in a Rapidly Changing Arctic," Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska,
http://www.afsc.noaa.gov/Publications/misc_pdf/IAMreport.pdf, JHR)

¶Tribal consultation: Alaska Natives want to be represented and provide input when important decisions are being considered that impact their land, their resources, and their way of life. Tribes have valuable information to contribute to the decision-making process, and they have a strong desire to participate in such decision-making. They noted that the Federal Government and tribal governments need to improve the system for effective and meaningful consultation on issues of mutual concern. Such a process should: (1) respect and take into account local and traditional knowledge; (2) provide a predictable and consistent framework for consultation; and (3) streamline consultations to minimize the workload burden on Alaska Native groups. Traditional knowledge: Local and traditional knowledge is considered by many to be an essential part of science-based environmental policy-making. Traditional knowledge is particularly valuable as it represents observations made repeatedly over many generations. During the current period of rapid change, the wealth of knowledge held by Alaska Natives can make key contributions to resource management and to collaborative research projects.

# COURTS CP

# SOLVENCY

**Supreme court can strike down moratoria via the takings clause**

Thrasher 12- B.A., Political Science, Colgate University, 2006; J.D. Candidate, Brooklyn Law School, 2012 (Edward, "Cleaning Up the Muck: A TAKINGS ANALYSIS OF THE MORATORIUM ON DEEPWATER DRILLING FOLLOWING THE BP OIL SPILL", 77 Brooklyn L. Rev. 1285, Lexis)//WK

The decision by Judge Feldman led to additional controversy surrounding the moratorium. Only days after the ruling, the Secretary publicly announced that the government was working on passing a second moratorium. n83 The government reiterated this intention when-just hours before the district court's decision was appealed before the United States Court of Appeals for the Fifth Circuit-a senior administration official announced that the government "would immediately issue a new moratorium" regardless of the outcome of the appeal. The maneuver sparked outrage from critics who claimed that the statements were made in a brazen attempt to intimidate the court. Nevertheless, on July 12, 2010, the Secretary issued a [*1298] memorandum rescinding the first moratorium but ordering a new-yet similar-blanket suspension on offshore oil drilling. Additionally, the government moved to dismiss the original suit on the grounds of mootness since the original moratorium was no longer in effect. Counsel for the plaintiffs, incensed by the government's actions, invoked Marbury v. Madison and exclaimed that the decision to pass a new moratorium with the same practical effects as the now enjoined original one constituted executive interference with the judicial branch and the judicial review process. The motion for dismissal was addressed on September 1, 2010, when Judge Feldman again ruled against the government, holding that mootness did not apply and stating that the second moratorium was essentially the same as the first one. In addressing the issue of whether the Secretary had the authority to rescind the first moratorium, he noted that the proper procedure for an agency seeking to reconsider a decision that is under judicial review is for the agency to move the court to remand. The court voiced its concern that "if agencies are not required to move to remand, they may use rescission and reissuance of their decisions as a way to manipulate the federal jurisdiction of U.S. courts. Ultimately, Judge Feldman concluded the rescission did have "some administrative force," but this was not enough to save the defendants' motion to dismiss. The court criticized their maneuvering, expressing that, "In reality, the new moratorium covers precisely the same rigs and precisely the same deepwater drilling in the Gulf of Mexico as did the first moratorium." The court did not specifically decide whether the second moratorium was again [*1299] arbitrary and capricious (the sole issue before the court was whether the case surrounding the first moratorium was now moot), but instead focused on whether the harm imposed by the first moratorium would also be imposed by the second. Under the voluntary cessation exception to mootness claims, a federal court will only find a case to be moot if the subsequent government action makes it clear that the initial harm could not reasonably be expected to recur. Judge Feldman noted that the government's public announcements immediately following his initial ruling sharply undermined their argument that the second moratorium was based on a significantly supplemented administrative record. More importantly, these public announcements and posturing indicated that there was a reasonable expectation the harm to the plaintiffs could recur and thus the government's repeal of the first moratorium did not render the action moot. Accordingly, Judge Feldman denied the defendants' motion to dismiss. For some time, while the Hornbeck suit was underway, new litigation continued to emerge as a result of the moratorium. Additional plaintiffs brought claims that the moratorium had effectively ended drilling in shallow water located in entirely different parts of the country. But it now [*1300] appears that any formal need for the courts to enjoin the moratorium has largely passed; the moratorium was lifted on October 12, 2010, several weeks before it was scheduled to terminate. Following the lifting of the moratorium, the

Hornbeck plaintiffs continued to evaluate their legal options, but it was generally believed that "this was a dispute that had run its course." There was lingering concern, however, that a de facto moratorium remained in place. Todd Hornbeck (CEO of Hornbeck) stated, The industry hasn't seen the final requirements for what we would have to do to be able to actually get a permit issued. . . . Until that is done, lifting the moratorium may be just a moot or perfunctory act. . . . I'm skeptical that it will be anytime soon that permits will be issued . . . . Critical politicians also exuded skepticism as to the practical effects of lifting the moratorium. These concerns proved to be legitimate. In a later decision on February 2, 2011, stemming from the Hornbeck litigation, Judge Feldman stated, "Still . . . no drilling permits have been issued for activities barred by [the moratorium] as of this date." Indeed, more than a year after the spill, the offshore oil exploration and [*1301] production industry was only "slowly opening up once more" in the Gulf of Mexico. The new regulations instituted "after the spill strengthened safety measures and reduced the risk of another catastrophic blowout." But as the Secretary stated, "there will always be risks involved with deep water drilling." Because future oil spills remain a likely possibility, it is necessary to clearly define the rights and responsibilities of the government in responding to these spills with blanket, albeit temporary, moratoria or similar regulations. Although the arbitrary and capricious arguments presented in Hornbeck proved to be an effective protection against an improper restriction of property rights, such claims provide better protection against a flawed decision-making process than they do against an unjust decision or result. Future problems may instead arise in circumstances where the government's decision to implement a moratorium is supported by an adequate Administrative Record, limiting the protection provided by the APA. These situations pose a threat to innocent parties whose property rights are unfairly burdened by that moratorium. Alternatively, there may be situations where the circumstances require a proper moratorium but where notions of justice and fairness nonetheless require some form of compensation to those negatively affected. Accordingly, takings claims should serve to fill this gap in protection, even though historically they have met with little success. III.The Hornbeck Takings Claim in the Context of Takings Clause Jurisprudence Although the focus in Hornbeck began with a claim that the moratorium was arbitrary and capricious, the plaintiffs [*1302] also briefly asserted that the moratorium constituted an unconstitutional taking of private property. Additionally, after joining the case in July 2010, Diamond Offshore alleged the following: By virtue of their actions, Defendants have violated Plaintiffs' rights under the Fifth Amendment to the U.S. Constitution. That amendment provides that no person shall suffer a "taking" of private property without due process of law or just compensation. As set forth above, the actions of Defendants herein constitute a taking of Plaintiffs' contract rights without due process of the law for which Plaintiffs seek non-monetary relief. The relevant provision of OSCLA requires the Secretary to manage the offshore leasing program, stating, "Leasing activities shall be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government." Certainly, the moratorium prevented leaseholders in the Gulf, even those operating safe rigs, from enjoying the fair market value of their property while the moratorium was in place. Undoubtedly, it can be said that much of this value in terms of access to the oil and gas was restored as soon as the moratorium was lifted, but this fails to account for the fact that entities in the oil industry rely on contracts and equipment that often have a limited lifespan. The industry as a whole was likewise threatened if oil rig operators and their crews chose to take their business to other, more business-friendly waters. The defendants' only response to the takings allegation was relegated to a footnote claiming that it should be "dismissed . . . because the second claim for relief, which purports to assert a Fifth Amendment Takings claim, is both [*1303] wholly without merit and outside the jurisdiction of this Court to adjudicate." Yet, it appears that the issue may not be as cut and dry as the defendants asserted. Takings law is extremely unsettled and has been described as "both lacking in theory and unpredictable in application." The United States Supreme Court has acknowledged as much, with Justice John Paul Stevens commenting

that "even the wisest lawyers would have to acknowledge great uncertainty about the scope of this Court's takings jurisprudence." This means that future **court decisions are required to settle the area of takings** law and that future plaintiffs have some latitude to persuade these courts to expand the protections afforded by the takings clause. Because future cases may not involve factual circumstances amenable to alternative legal remedies such as the arbitrary and capricious claims presented in Hornbeck, the takings clause could serve as an alternative means for protecting against overly broad and unfairly burdensome regulations.

**The Supreme Court has authority and precedent to strike down the moratorium**
Shapiro, Dverotsky, and Chosiad 13-, *senior fellow in constitutional studies in the Cato Institute, ** has argued before federal and state courts nationwide, focuses on appellate advocacy, complex motions, and strategic counseling, ***attorney focusing on practice on appellate advocacy and complex civil litigation (Ilya, Shay, and Craig, "BRIEF OF THE CATO INSTITUTE AS AMICUS CURIAE IN SUPPORT OF PETITIONERS", Amicus Brief for the Supreme Court Case HORNBECK OFFSHORE SERVICES, LLC v. JEWELL, object.cato.org/sites/cato.org/files/pubs/pdf/hornbeck_filed_brief.pdf)//WK
On April 20, 2010, an explosion took place on the Deepwater Horizon offshore drilling rig operating in the Gulf of Mexico. After this explosion, the Executive apparatus kicked into high gear. The President immediately called for a report, within 30 days, on additional regulations to address the safety of deepwater drilling. (Pet.App.2a-3a.) The Secretary of the Interior then announced that he would unilaterally suspend all applications for drilling permits until the report was published. Id. at 3a. The report itself announced a complete moratorium on all applications for drilling permits as well as all drilling currently underway. Id. Interested parties sought an injunction in district court against the moratorium. When the report was revealed to be politically motivated, and to have falsely claimed the support of industry experts, the court preliminarily enjoined operation of the moratorium, roughly a month after it was issued. Id. at 3a-5a Already the Executive's intrinsic advantages were on display: it could act quickly and decisively, whereas court-ordered relief, at its fastest, took a full month. But for those on the wrong side of the political issue, it would only get worse. After the injunction issued, the Secretary immediately took steps to negate it; he issued a press release attacking the injunction and announcing he would soon issue a new moratorium. Id. at 5a-6a. The government also appealed the injunction to the Fifth Circuit. Id. at 6a. Four days after that appeal was denied, the Secretary issued a new moratorium that was "the same in scope and substance" as the original , and argued that the case should be declared moot. Id. at 7a (internal quotation marks omitted; emphasis added). After a remand to the district court, which found the claim live, the Fifth Circuit reversed and declared the case moot. This was now four months after the first, six-month moratorium took effect. Id. at 7a-8a. Before the district court could rule on the second moratorium, a few weeks before it was set to expire anyway, the government lifted the moratorium and mooted the merits case for good. Id. at 8a. When the original plaintiffs sought to find the government in contempt, and the district court agreed, the Fifth Circuit reversed on the ground that the injunction only prohibited the government from enforcing the first moratorium, not the second. Id. at 8a-9a, 16a. This demonstrates how the government wields substantial powers to evade, delay, and generally wreak havoc with even the most carefully considered injunctions. And if it is intent on defying a court order, the scope of the remedy addressing this defiance—i.e., a court's power to hold the government in civil contempt—becomes a matter of particular concern. The government should not be above the law, and its failure to be held accountable represents a failure by the judiciary to maintain the tenuous balance among our "constitutional system of checks and balances." N. Pipeline Const. Co. v. Marathon Pipe Line Co., 458 U.S. 50, 58 (1982). The rule of law requires that all parties, private and public, play by the same rules when litigating in the courts of the United States. This is

especially true when dealing with courts' power to hold parties in contempt, because that is the only power that ensures that courts are more than "mere boards of arbitration, whose judgments and decrees would be only advisory." Gompers v. Bucks Stove & Range Co., 221 U.S. 418, 450 (1911). **For these reasons, and those set forth in the Petition, this Court should grant certiorari and correct the error of the court below**. To do otherwise would severely limit the power of injunctions to restrain the federal government.

# SEPARATION OF POWERS NB

**Ruling against the moratorium key to preserve separation of powers**
Shapiro, Dverotsky, and Chosiad 13-, *senior fellow in constitutional studies in the Cato Institute, ** has argued before federal and state courts nationwide, focuses on appellate advocacy, complex motions, and strategic counseling, ***attorney focusing on practice on appellate advocacy and complex civil litigation (Ilya, Shay, and Craig, "BRIEF OF THE CATO INSTITUTE AS AMICUS CURIAE IN SUPPORT OF PETITIONERS", Amicus Brief for the Supreme Court Case HORNBECK OFFSHORE SERVICES, LLC v. Jewell, object.cato.org/sites/cato.org/files/pubs/pdf/hornbeck_filed_brief.pdf)//WK
The general rule that government and private litigants be held to the same standards is particularly important in the context of civil contempt, which is one of the most important checks that the judiciary, as the "weakest branch," has on the Executive. The ability of courts to check the Executive's power is critical to the institutional legitimacy of the federal courts. The Founders understood the inherent weakness of a branch of government that had "no influence over either the sword or the purse." The Federalist No. 78 , at 465 (Alexander Hamilton) (Clinton Rossiter ed., 1961). What Hamilton called "the natural feebleness of the judiciary" put it "in continual jeopardy of being overpowered, awed, or influenced by its co-ordinate branches." Id. at 466; see also Commodity Futures Trading Comm'n v. Schor, 478 U.S. 833, 848 (1986) (discussing "litigants' right to have claims decided before judges who are free from potential domination by other branches of government"). Because courts "have neither FORCE nor WILL but merely judgment," they "must ultimately depend upon the aid of the executive arm even for the efficacy of [their] judgments." The Federalist No. 78, at 465. Despite the judiciary's weakness, its status as a co-equal branch of government has proven crucial in realizing Hamilton's other prediction: that courts, insulated from the winds of partisan faction, can be an "excellent barrier to the encroachments and oppressions of the representative body," and "the best expedient which can be devised in any government to secure a steady, upright, and impartial administration of the laws." Id. **This case presents the problem of what happens when the judgment of a court is pitted against the full force of the Executive**. At first, it might appear that courts have no real way of enforcing their decisions. As President Jackson reportedly put it after Chief Justice Marshall ordered the release of Indian missionaries in Worcester v. Georgia, 31 U.S. (6 Pet.) 515 (1832), "John Marshall has made his decision; now let him enforce it!" And at the most basic level, the judiciary depends on a general acceptance of the principle that courts have power to issue binding judgments whenever jurisdiction lies. 2 See William Baude, The Judgment Power, 96 Georgetown L.J. 1807 (2008). But even assuming a court's power to issue binding judgments, those judgments bind only the parties in a particular case. Without openly flouting a judgment, there are numerous ways for the Executive to continue to advance its interests beyond litigation. It could act against other parties, waiting for them to resort to the courts, then rely on delay to accomplish its objectives before the courts are able to decide each separate controversy. It could act administratively and meet every court challenge with its legions of lawyers. Through the equitable power of an injunction, courts may forestall some of these maneuvers, but even then a clever Executive can evade the courts, who may neither initiate litigation nor act with the speed and coordination of the unitary Executive. See Federalist No. 70 , at 423 (Alexander Hamilton) (describing the "vigorous" and "energetic" Executive as "essential" to our plan of government). As the government did in this case, it could make an "endrun" around an injunction by repeating its enjoined conduct in a barely distinguishable form. (Pet.App.16a.) From its earliest days, this Court recognized one means by which it could check the actions of the other branches of government. Courts, it explained, possess certain "implied powers," which draw "from the

nature of their institution" and are necessary to implement their judgments. United States v. Hudson & Goodwin, 11 U.S. (7 Cranch) 32, 34 (1812). In some ways these powers were greater than those of "[t]he legislative authority of the Union," because courts need not "first make an act a crime" before they can punish it. Id. Those powers include the ability "[t]o fine for contempt—imprison for contumacy—inforce [sic] the observance of order, &c." Id. These powers "are necessary to the exercise of all other[]" powers, id., by ensuring that parties comply with court orders, and are "essential to the preservation of order in judicial proceedings" as well as "the due administration of justice," Ex parte Robinson, 86 U.S. 505, 510 (1873); see also Chambers v. NASCO, Inc., 501 U.S. 32, 46 (1991) (discussing courts' inherent powers). There is also little danger in holding the government to the prevailing rules for civil contempt because findings of contempt against high-level government officials are rare. Such a finding most recently occurred in 1999, when the U.S. District Court for the District of Columbia found two Cabinetlevel Secretaries in contempt during litigation over the government's trusteeship of Indian lands. See Cobell v. Babbitt, 37 F. Supp. 2d 6, 14 (D.D.C. 1999) (Lamberth, J.). This event was remarkable enough to provoke scholarly investigation into such high-level contempts, which revealed the extent of their rarity. See Richard J. Pierce, Jr., Judge Lamberth's Reign of Terror at the Department of the Interior , 56 Admin. L. Rev. 235, 235 (2004); Jamin B. Raskin, Professor Richard J. Pierce's Reign of Error in The Administrative Law Review, 57 Admin. L. Rev. 229, 249 (2005). The author of one of these articles, defending Judge Lamberth's decision, pointed to a civil contempt order against the Secretary of Agriculture in 1992, against the Administrator of the Environmental Protection Agency in 1984, and against the Attorney General in 1979. Raskin, supra, at 249 (citing McBride v. Coleman, 955 F.2d 571 (8th Cir. 1992); Sierra Club v. Ruckelshaus, 602 F. Supp. 892 (N.D. Cal. 1984); In re Attorney General of the United States, 596 F.2d 58 (2d Cir. 1979), cert. denied sub nom., Socialist Workers Party v. Attorney General of the United States, 444 U.S. 903 (1979)). Beyond these rare instances, occurring roughly once a decade, finding high-level government officials in contempt is exceptional. See, e.g., Jones v. Clinton, 36 F. Supp. 2d 1118, 1127 (E.D. Ark. 1999) (President of the United States "g[ave] false, misleading and evasive answers that were designed to obstruct the judicial process"). But see Am. Civil Liberties Union v. Dep't of Defense, 827 F. Supp. 2d 217, 230-33 (S.D.N.Y. 2011) (refusing to find the Central Intelligence Agency in contempt for destroying videotapes of testimony that had been ordered to be produced by the court). And some of these instances have been reversed on appeal. See, e.g., Cobell v. Norton, 226 F. Supp. 2d 1 (D.D.C. 2002), vacated, 334 F.3d 1128 (D.C. Cir. 2003). The rarity of contempt proceedings against the government only heightens their importance. Indeed, particularly given the government's position, it would be pernicious to excuse its misconduct any more than that of a private party. Consider the words of Judge Lamberth before holding the government in contempt in 1999: "The court is deeply disappointed that any litigant would fail to obey orders for production of documents," "[b]ut when that litigant is the federal government, the misconduct is even more troubling." Cobell v. Babbitt, 37 F. Supp. 2d at 38. He went on to say that "I have never seen more egregious misconduct by the federal government," id., signaling the importance of the case, and the need for it to be addressed with sanctions. And if government attorneys choose to defy a court, they have mighty powers at their disposal. This case illustrates the point vividly. The United States commissioned the opinions of numerous experts, and then distorted those views to reach the politicized, predetermined conclusion that there would be no deepwater drilling for six months. (Pet.App.3a-5a.) Calling foul on the government's unjustified actions against the Gulf economy, the district court used its equitable powers to enjoin the enforcement of this moratorium. Id. at 5a. But the Executive's impunity continued, and showed even more clearly in its response to the court's injunction—it essentially ignored it. Id. at 5a-7a. After making immaterial changes to the report, it crafted an "end-run" around the injunction and issued a new moratorium that "was the same in scope and substance" as the original. Id. at 7a, 16a (internal quotation marks omitted). As noted earlier, after the district court held the

government in contempt, the Fifth Circuit reversed, on the grounds that the government's enforcement of the new moratorium did not violate the district court's injunction from enforcing the old moratorium. Indeed, it is often the case that the government's extraordinary resources will empower it to act with few restraints. Judges are often the only guardians against the potential for such government overreach. This Court's review is therefore urgently needed, not only to resolve the split of authority identified by the Petitioners, but also to rein in the government when it attempts an end-run around the authority of the courts.

# AT: LINKS TO POLITICS

**Courts shield the link**

Whittington 5- Cromwell Professor of Politics – Princeton University (Keith E., ""Interpose Your Friendly Hand": Political Supports for the Exercise of Judicial Review by the United States Supreme Court", American Political Science Review, 99(4), November, p. 585, 591-592, JSTOR)//WK

Political leaders in such a situation will have reason to support or, at minimum, tolerate the active exercise of judicial review. In the American context, the presidency is a particularly useful site for locating such behavior. The Constitution gives the president a powerful role in selecting and speaking to federal judges. As national party leaders, presidents and presidential candidates are both conscious of the fragmented nature of American political parties and sensitive to policy goals that will not be shared by all of the president's putative partisan allies in Congress. We would expect political support for judicial review to make itself apparent in any of four fields of activity: (1) in the selection of "activist" judges, (2) in the encouragement of specific judicial action consistent with the political needs of coalition leaders, (3) in the congenial reception of judicial action after it has been taken, and (4) in the public expression of generalized support for judicial supremacy in the articulation of constitutional commitments. Although it might sometimes be the case that judges and elected officials act in more-or-less explicit concert to shift the politically appropriate decisions into the judicial arena for resolution, it is also the case that judges might act independently of elected officials but nonetheless in ways that elected officials find congenial to their own interests and are willing and able to accommodate. Although Attorney General Richard Olney and perhaps President Grover Cleveland thought the 1894 federal income tax was politically unwise and socially unjust, they did not necessarily therefore think judicial intervention was appropriate in the case considered in more detail later (Eggert 1974, 101– 14). If a majority of the justices and Cleveland-allies in and around the administration had more serious doubts about the constitutionality of the tax, however, the White House would hardly feel aggrieved. We should be equally interested in how judges might exploit the political space open to them to render controversial decisions and in how elected officials might anticipate the utility of future acts of judicial review to their own interests. [CONTINUES]

There are some issues that politicians cannot easily handle. For individual legislators, their constituents may be sharply divided on a given issue or overwhelmingly hostile to a policy that the legislator would nonetheless like to see adopted. Party leaders, including presidents and legislative leaders, must similarly sometimes manage deeply divided or cross-pressured coalitions. When faced with such issues, elected officials may actively seek to turn over controversial political questions to the courts so as to circumvent a paralyzed legislature and **avoid the political fallout** that would come with taking direct action themselves. As Mark Graber (1993) has detailed in cases such as slavery and abortion, elected officials may prefer judicial resolution of disruptive political issues to direct legislative action, especially when the courts are believed to be sympathetic to the politician's own substantive preferences but even when the attitude of the courts is uncertain or unfavorable (see also, Lovell 2003). Even when politicians do not invite judicial intervention, strategically minded courts will take into account not only the policy preferences of well-positioned policymakers but also the willingness of those potential policymakers to act if doing so means that they must assume responsibility for policy outcomes. For cross-pressured politicians and coalition leaders, shifting blame for controversial decisions to the Court and obscuring their own relationship to those decisions may preserve electoral support and coalition unity without threatening active judicial review (Arnold 1990; Fiorina 1986; Weaver 1986). The conditions for the exercise of judicial review may be relatively favorable when judicial invalidations of legislative policy can be managed to the electoral benefit

of most legislators. In the cases considered previously, fractious coalitions produced legislation that presidents and party leaders deplored but were unwilling to block. Divisions within the governing coalition can also prevent legislative action that political leaders want taken, as illustrated in the following case.

**Courts can provide political cover**

Rosenberg 8- Professor at University of Chicago (Gerald, "THE HOLLOW HOPE: CAN COURTS BRING ABOUT SOCIAL CHANGE?", 2nd Edition, 2008, p. 34-35, JSTOR)//WK

Finally, court orders can simply provide a shield or cover for administrators fearful of political reaction. This is particularly helpful for elected officials who can implement required reforms and protest against them at the same time. This pattern is often seen in the school desegregation area. Writing in 1967, one author noted that "**a court order is useful in that it leaves the official no choice and a perfect excuse**" (Note 1967, 361). While the history of court-ordered desegregation unfortunately shows that officials often had many choices other than implementing court orders, a review of school desegregation cases did find that "many school boards pursue from the outset a course designed to shift the entire political burden of desegregation on the courts" (Kalodner 1978, 3). This was also the case in the Alabama mental health litigation where "the mental health administrators wanted [Judge] Johnson to take all the political heat associated with specific orders while they enjoyed the benefits of his action" (Cooper 1988, 186). Thus, Condition IV: Courts may effectively produce significant social reform by providing leverage, or a shield, cover, or excuse, for persons crucial to implementation who are willing to act.

Obama doesn't get the blame for Court actions---healthcare proves

Sanger-Katz 12- healthcare correspondent for the National Journal (Margot, Poll: No Blame if Court Nixes Health Care Law, National Journal, http://www.nationaljournal.com/daily/poll-no-blame-if-court-nixes-health-care-law-20120605)//WK

Even though President Obama fought for passage of the landmark 2010 health care law, very small minorities say their attitudes about him would change one way or the other should the Supreme Court strike down the law that is so often referred to as "Obamacare." Two-thirds of those surveyed in a new public-opinion poll said that their respect for Obama would be unchanged if the Supreme Court struck down his signature legislative achievement. Fourteen percent said they would respect Obama more under such a scenario, while 15 percent said they would respect him less. That trend was consistent across the political spectrum—similar proportions of Republicans, Democrats, and independents said they would be unmoved, despite the pundits' speculation that a Court decision declaring the Affordable Care Act unconstitutional in part or in its entirety might alter public opinion toward the president. The nonplussed attitude also held across nearly all age, income, regional, and racial categories, with at least 60 percent of each surveyed group saying that the ruling would have no impact on their view of the president.

# BIOGAS CP

# 1NC BIOGAS CP

**Counterplan Text: The United States federal government should provide incentives for, recognize the advantages of, and lower restrictions related to the development and production of biomethane and biogas.**

**CP solves – gov action can legitimize renewable gas production – solves emissions, provides jobs, can replace natural gas**

Chahbazpour and LaRusso 10 - *Donald is the director, network strategist, and gas systems engineer at National Grid and has a degree from the School of International and Public Affairs from Columbia University. **Anthony is the project director of LNG Liquefaction at National Grid which is a electric and gas utility company from the U.K. (Donald and Anthony, "Renewable Gas – Vision for a Sustainable Gas Network", National Grid, 2010, http://www.nationalgridus.com/non_html/ng_renewable_wp.pdf)//BD

Renewable gas has the potential to make a significant contribution to the reduction of greenhouse gas (GHG) emissions while creating local jobs and enhancing security of supply.

This paper represents National Grid's view on this important opportunity, and provides information on the potential scope and scale, along with a view on what needs to be done in order to realize the associated benefits. In summary:

Renewable gas is a viable option and should be considered as an alternative energy source similar to wind or solar power.

The technology behind renewable gas exists today, but is dependent upon us to cultivate it further.

The biggest driver of renewable gas is GHG reduction, but what makes renewable gas more compelling is that it also enhances diversity of supply while providing a solution for using local waste resources to produce renewable energy.

Government support is critical in developing this resource and, without action now, a great opportunity could be missed.

The paper also gives an overview of renewable gas technology and clears up misconceptions about how this energy is produced and used. Finally, the paper outlines a vision of what a sustainable gas network could look like.

The content is supported by a detailed study commissioned by National Grid that indicates that, over the long term, renewable gas has the technical* potential to meet up to 25 percent of the natural gas demand in the four states served by National Grid (Massachusetts, New Hampshire, New York and Rhode Island), not including natural gas demand for power generation (see Table 1). That is enough energy to meet the annual demand of approximately 2.2 million homes that use natural gas for heating in the Northeast. It is important to mention that all of the feedstocks considered for the production of renewable gas are sustainable, and a great consideration has been given by adopting the approach of not solving one problem by creating another.

In this paper, "renewable gas" refers to pipeline quality gas derived from biomass that is injected into the natural gas distribution network for direct use in existing natural gas appliances.

Produced mainly via anaerobic digestion (AD) or thermal gasification (TG), renewable gas represents a readily implementable and cost-effective solution to reduce GHG emissions. Renewable gas can increase the diversity of supply as well as provide a real and innovative solution for utilizing local waste resources to produce a renewable source of energy. The capital investment required to deliver

the renewable gas across the four states is estimated to be approximately $7 billion, which compares well with the cost of delivering other large-scale renewable projects such as solar or wind. Construction, operation and maintenance of renewable gas production plants are estimated to create up to 9,000 new local jobs, and reduce carbon dioxide emissions by approximately 16 million tons per year (equal to annual carbon dioxide emissions of approximately 3 million cars), as well as additional GHG benefits of avoided methane that is released into the atmosphere.

**Government support will be the most critical factor in delivering renewable gas.** Currently, there is a significant disparity between government policies supporting renewable gas and renewable electricity. Public policymakers need to level the playing field by offering comparable incentives for renewable gas that are offered for renewable electricity. Further, there is an urgent need to recognize the environmental benefits of renewable gas projects. Currently, the environmental attributes of renewable gas projects are only recognized when being used for power generation.

The intent of this paper is to initiate debate and discussions with all of the stakeholders who have an interest in building a sustainable energy future and to create a practical roadmap to achieve that vision. National Grid is committed to that vision and believes that renewable gas is a viable resource to a sustainable low-carbon economy.

## What is Renewable Gas?

Renewable gas, also known as **biomethane, is pipeline quality gas that is fully interchangeable with natural gas.** To date, direct injection of renewable gas has been limited to a small number of projects in the United States. For example, the Fresh Kills landfill in Staten Island, New York has been operating for almost 30 years providing 1.8 billion cubic feet (Bcf) of pipeline quality gas annually. In addition, there are a few individual farms and waste water treatment plants that have utilized clean-up technologies to make compressed natural gas (CNG) for vehicles.

Currently, most producers either flare the raw gas or utilize it in a generator to produce electricity. This raw gas, commonly referred to as "biogas," is composed of roughly 50 to 60 percent methane and 40 to 50 percent carbon dioxide ($CO_2$). Flaring the gas converts methane to $CO_2$ thereby reducing the GHG effect by a factor of 20.

Renewable electricity incentives have led to a proliferation of power generation projects at landfills, waste water treatment plants and some farms, but using this gas to produce pipeline quality gas is a more efficient way to utilize the energy. In addition, one of the drawbacks of using biomass for power generation is the air permitting process, which can be complex and lengthy. Figure 1 (on page 4) displays the renewable gas alternative. Biomass emits methane into the atmosphere when it is decomposing, or $CO_2$ when it is digested and flared. By collecting, conditioning and injecting a high percentage of the available methane into the natural gas network, customers can directly use the gas in their existing natural gas appliances and other end-use applications. Further, renewable gas reduces GHG emissions by fuel substitution, essentially switching from a fossil fuel to a renewable fuel. Using renewable fuel represents the recycling of carbon already circulating in the environment, and using fossil fuel represents new emissions of carbon that was previously trapped geologically



beneath the earth. The proposed scenario (see Figure 1) provides a benefit that can be gained from changing the full lifecycle of waste streams that would otherwise lead to an

increase of GHG emissions.

How is Renewable Gas Produced?

There are two principle technology platforms for producing renewable gas. One is based on thermal gasification (TG) and the other on anaerobic digestion (AD). Each platform involves the production of raw gas (biogas) that is subsequently upgraded to pipeline quality gas (renewable gas or biomethane; see Appendix for a brief technical overview). In that sense, these processes are not so different from how natural gas is produced: gas from the wellhead (produced from decomposition of organic matter) is processed into a pipeline quality fuel by removing unwanted constituents before being compressed for pipeline transmission.

The two biogas production processes involve established technologies that utilize a wide range of feedstocks. AD is typically used for feedstocks with moisture content of 70 percent or higher, such as waste water, food waste and animal manures. AD has been applied at scales as small as a single farm to plants processing hundreds of millions of gallons of waste water per day. TG works best with low-moisture feedstocks such as wood chips, agricultural residues and energy crops. Gasification has been used since the mid-1800s to produce "town gas" from coal. However, with the advent of the interstate pipeline system in the 1940s and 1950s, town gas was replaced by natural gas. In that sense, renewable gas represents the utilization of existing technology in a more modern, environmentally responsible form.

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National Grid recently commissioned the Gas Technology Institute (GTI) to conduct a market assessment, and the following explains the results of the study. The study included a comprehensive review of all the potential feedstocks statewide in the states where National Grid operates: Massachusetts, New Hampshire, New York and Rhode Island. The results of the analysis are summarized in Table 2.

Although New York state represents the greatest technical potential, the appropriate way to assess the opportunity is to compare this potential relative to the state's demand for natural gas, as captured in Table 1. Principally, the potential for renewable gas is directly linked to population and size of the state.

Approximately 20 percent of the overall technical potential would be produced by utilizing AD technology. This number could increase if the organic fraction of municipal solid waste (MSW) (i.e., food waste) is added to this category as well. AD is a commercially viable technology, and there are many commercial injection facilities around the world. In addition, with recent clean-up technology advancements, feedstock sources such as waste water treatment plants, landfills and livestock manure represent the initial commercial targets for immediate renewable gas production.

The majority of the potential will require gasification technology. Gasification is a proven technology; however, it is not currently commercially viable for biomass. That said, there are a number of demonstration projects in the U.S. and Europe, and National Grid expects that the technology will be commercially available over the next few years.

# 2NC BIOGAS SOLVES

**Biogas can replace natural gas – more pure than natural gas and same quality**
Chahbazpour and LaRusso 10 - *Donald is the director, network strategist, and gas systems engineer at National Grid and has a degree from the School of International and Public Affairs from Columbia University. **Anthony is the project director of LNG Liquefaction at National Grid which is a electric and gas utility company from the U.K. (Donald and Anthony, "Renewable Gas – Vision for a Sustainable Gas Network", National Grid, 2010, http://www.nationalgridus.com/non_html/ng_renewable_wp.pdf)//BD
The biggest misconception about renewable gas is that it is somehow different or inferior to conventional natural gas. Most pipeline natural gas supplied by utilities is composed of 80 to 95 percent methane. Methane is the same substance that results
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from decay of organic matter in some swamps, sewage treatment plants and landfills. However, unlike most gas recovered from these sources, pipeline natural gas contains other hydrocarbon and non-hydrocarbon constituents, including ethane, propane, butane, pentane, hundreds of other trace hydrocarbon constituents, carbon dioxide, nitrogen, trace sulfur compounds and moisture. In summary, pipeline natural gas is a complex mixture of the above mentioned constituents, while processed biogas, or biomethane, is simply methane with little or no trace constituent issues of concern.
Another misconception is that gas quality is directly related to "heat content."
Gross Heating Value (also called the "higher heating value" or "heat content") is simply the amount of energy per standard cubic foot of gas transferred as heat from the complete ideal combustion of the gas with air at standard temperature and pressure. Heating value is not "gas quality," rather an indicator of composition and associated energy content.
In short, gas quality considerations are not a barrier for introducing renewable gas into the North American pipeline grid. Various technologies exist today to process raw biogas effectively to yield a product indistinguishable from a constituent perspective to natural gas. Biogas can be treated to remove trace constituents to comparable levels in traditional pipeline supplies. However, continuous monitoring of critical variables is necessary to ensure the treatment process remains effective. Development of gas quality monitoring plans is an important component in an overall strategy to maximize introduction of this valuable resource. It should be noted that each evaluation is unique, and that pre-treatment testing and historical evaluation of raw biogas are necessary to ensure treatment systems are optimized. A "one size fits all" solution is not the optimum solution to the issue of gas treatment; rather, a combination of treatment and blending schemes may be necessary to optimize and fully integrate renewable supplies into a market area. National Grid has established a standardized approach to determine system impacts and a process to integrate renewable gas into its distribution network.

Biogas has a huge potential – 4.2 trillion cubic ft per year
National Renewable Energy Laboratory 13 – federal laboratory dedicated to research, develop, commercialize and deploy renewable energy ("Biogas Potential in the United States", National

Renewable Energy Laboratory, August 2013,
http://www.nrel.gov/docs/fy14osti/60178.pdf)//BD
Biogas is the gaseous product of anaerobic digestion, ¶ a biological process in which microorganisms break ¶ down biodegradable material in the absence of oxygen. ¶ Biogas is comprised primarily of methane (50%–70%) ¶ and carbon dioxide (30%–50%), with trace amounts of ¶ other particulates and contaminants. It can be produced ¶ from various waste sources, including landfill material; ¶ animal manure; wastewater; and industrial, institutional, ¶ and commercial organic waste. Biogas can also be ¶ produced from other lignocellulosic biomass (e.g., crop ¶ and forest residues, dedicated energy crops) through dry ¶ fermentation, co-digestion, or thermochemical conversions ¶ (e.g., gasification). ¶ Biogas can be combusted to provide heat, electricity, or ¶ both. In addition, it can be upgraded to pure methane—¶ also called biomethane or renewable natural gas—by ¶ removing water, carbon dioxide, hydrogen sulfide, and ¶ other trace elements. This upgraded biogas is comparable ¶ to conventional natural gas, and thus can be injected ¶ into the pipeline grid or used as a transportation fuel in a ¶ compressed or liquefied form. Renewable natural gas is ¶ considered a "drop-in" fuel for the natural gas vehicles ¶ currently on the road and can qualify as an advanced ¶ biofuel under RFS2. It can also be a source for renewable ¶ hydrogen, which can be used in stationary fuel cells and ¶ fuel cell electric vehicles.¶ The methane content of biogas is the usable portion of ¶ the gas and determines its calorific value. The methane ¶ potential from landfill material, animal manure, ¶ wastewater, and industrial, institutional, and commercial ¶ organic waste in the United States is estimated at about 7.9 ¶ million tonnes per year, which is equal to about 420 ¶ billion cubic feet or 431 trillion British thermal units. ¶ This amount could displace about 5% of current natural ¶ gas consumption in the electric power sector and 56% ¶ of natural gas consumption in the transportation sector ¶ (EIA 2013). While this resource potential appears small ¶ and easy to overlook given the abundance of relatively ¶ inexpensive natural gas, it presents an opportunity for ¶ greenhouse gas mitigation (methane is 21 times more ¶ potent than carbon dioxide) and production of renewable ¶ energy fuel. These waste resources are underutilized ¶ and considered "low-hanging fruit" in biogas generation ¶ thus their use could stimulate further development of the ¶ industry in the United States.¶ The methane generation potential is expected to be much ¶ higher if lignocellulosic biomass resources are used. Future ¶ estimates reach 4.2 trillion cubic feet per year, or about ¶ 4,318 trillion British thermal units (NPC 2013), which could ¶ displace about 46% of current natural gas consumption ¶ in the electric power sector and the entire natural gas ¶ consumption in the transportation sector (EIA 2013a). This ¶ potential corresponds to about 35 billion gasoline gallon ¶ equivalents, which is three times more than current gasoline ¶ consumption (EIA 2013b). However, this estimate assumes ¶ that all biomass resources are used for biogas production ¶ and it does not account for competing uses, such as the ¶ production of other fuels or power generation in dedicated ¶ or co-fired power plants. This estimate also considers only ¶ thermal gasification, which is a well-understood technology ¶ used in coal conversions but not yet proven at large scale for ¶ biomass resources. ¶ Lignocellulosic biomass is a promising candidate for ¶ anaerobic digestion, a conversion pathway explored ¶ extensively in Europe but not in the United States. Future ¶ work will examine the biogas generation potential from ¶ solid biomass resources via anaerobic digestion in the ¶ United States and compare the output and efficiency to the ¶ biogas potential from solid biomass via thermochemical ¶ conversion pathways (also called syngas).

**No environmental exploitation – all energy from waste or byproducts**
Alternative Fuels Data Center 14 – Provides data to find ways to reduce petroleum consumption and is part of the US Department of Energy ("Renewable Natural Gas (Biomethane)", Alternative Fuels Data Center, 6-13-2014,
http://www.afdc.energy.gov/fuels/emerging_biogas.html)//BD
Biogas is a product of decomposing organic matter, such as sewage, animal byproducts, and

agricultural, industrial, and municipal solid waste. To fuel vehicles, biogas must be upgraded to a purity standard and either compressed for onsite dispensing or injected into the gas grid for distribution to dispersed fueling locations.

Biogas from Landfills

Landfills are designated locations for disposal of waste collected from residential, industrial, and commercial entities. Landfills are the third-largest source of human-related methane emissions in the United States, according to EPA. Biogas collection is practical for landfills at least 40 feet deep with at least 1 million tons of waste. Biogas from landfills is also called landfill gas (LFG), as the digestion process takes place in the ground rather than in an anaerobic digester. As of July 2013, there were about 621 operational LFG projects in the United States, according to EPA. However, most of these projects use biogas to produce electricity rather than power natural gas vehicles.

Find examples of landfills using biogas for vehicle fuel from the Sanitation Districts of Los Angeles County.

Biogas from Livestock Operations

Biogas recovery systems at livestock operations can produce renewable fuel. Animal manure can be collected and delivered to an anaerobic digester to stabilize and optimize methane production. The resulting biogas can be upgraded and used to fuel natural gas vehicles. EPA estimates that 8,200 U.S. dairy and swine operations could support biogas recovery systems, with the potential to generate more than 13 million megawatt-hours and displace about 1,670 megawatts of fossil fuel-fired generation collectively per year. Biogas recovery systems are also feasible at some poultry operations and confined animal operations.

There are several biogas-to-CNG projects at animal farms in the United States, including Hilarides Dairy in California and Fair Oaks Dairy in Indiana. More information can be found at EPA's Operating Anaerobic Digester Projects.

Biogas from Wastewater Treatment

Biogas could be produced during the digestion of solids removed in the wastewater treatment process. EPA (PDF) estimates this biogas potential to be about 1 cubic foot of digester gas per 100 gallons of wastewater. Energy generated at U.S. wastewater treatment plants (WWTPs) could potentially meet 12% of the national electricity demand, according to the National Association of Clean Water Agencies (PDF); there are over 16,000 WWTPs in the United States, and about 1,500 employ anaerobic digestion to produce biogas, which is used on site.

Other Sources of Biogas

Other sources of biogas include organic waste from industrial, institutional, and commercial entities, such as food manufacturing and wholesalers, supermarkets, restaurants, hospitals, educational facilities, etc. Learn more about Clean World's Sacramento BioDigester project, the largest anaerobic digestion system of its kind in North America.

Biogas could also be produced from lignocellulosic material, such as crop residues and dedicated energy crops, via thermochemical conversions, co-digestion, and dry fermentation. These technologies are well underway in Europe (PDF), with limited applications in the United States.

# 2NC INCENTIVES KEY

**Policy changes key to growth and stability of bioenergies**
ACORE 2014 – American Council On Renewable Energy is a nonprofit organization that seeks to expand renewable energy in the US ("The Outlook for Renewable Energy In America", ACORE, 2014, http://www.acore.org/files/pdfs/ACORE_Outlook_for_RE_2014.pdf)//BD
POlICy RECOMMEndATIOnS
Key policy changes will help encourage the growth and stability of the bioenergy industry:
• Recognize the carbon benefits of bioenergy: The U.S. Environmental Protection Agency (EPA) is considering a proposed rule that will address emissions from biomass facilities. It is important that EPA embrace the science and recognize that, because biomass carbon is part of a closed-loop cycle, it has low or no net carbon emissions and should not be regulated in the same manner that the Administration is proposing for coal plants.
• Energy tax reform should promote all renewable technologies equally: It is not enough to simply extend the current production tax credits. Changes to energy tax policy should be made to (1) maximize deployment; (2) encourage project stability that will help secure private investment; (3) take into account the development challenges that are unique to development for each renewable energy technology; (4) assume the viability of existing biomass plants; and (5) be customized for optimal advantage by the diverse energy facility and owner types.
• Federal and state energy policy and renewable targets should recognize biomass as the valuable renewable resource that it is: Biomass, as a reliable baseload energy source, which contributes to a reduced risk of catastrophic forest fires, should be an essential element of every renewable energy portfolio. Science demonstrates that properly deployed biomass power promotes carbon stocks and the managed forest industry, which can serve a central role in reducing carbon dioxide emissions.

# MANUFACTURING CP

# MANUFACTURING CP

**The United States federal government should:**

**- Designate federal manufacturing innovation programs as an Interagency Science and Technology Initiative.**

**- Evolve the role of the national labs and strengthen the National Network for Manufacturing Innovation program to improve R&D**

**- Strengthen the National Network for Manufacturing Innovation and the role of the national labs**

**- Develop a national manufacturing perceptions campaign**

**- Realign Workforce development programs for Advanced Production Technologies.**

**- Lead a study evaluating the implications of natural gas exports on jobs and economic growth**

**The CP solves manufacturing and the economy**

**Laszkiewicz, 6/9/14** – the Chair of the Manufacturing Council. He is the Vice President and General Manager of Rockwell Automation. (Michael, "Keeping the United States on Top of Manufacturing Innovation," International Trade Administration http://blog.trade.gov/2014/06/09/keeping-the-united-states-on-top-of-manufacturing-innovation/)//IS

I serve as chair of the Manufacturing Council, which advises Secretary of Commerce Penny Pritzker on the manufacturing industry. The Council is composed of representatives from large and small manufacturers from across the United States.

Our objective is to identify and recommend ways the U.S. government can respond to the challenges facing U.S. manufacturers to ensure our competitiveness at home and abroad.

At our most recent meeting, the Council adopted three letters of recommendation focused on workforce development best practices; a national campaign to address the misperceptions around manufacturing careers; and a shale gas study to inform liquid natural gas export policy decisions, and opportunities in manufacturing, innovation, and research and development.

We believe these recommendations will better position the United States as a leader not just in manufacturing productivity, but in manufacturing and science innovation. Having the right technology, the right workforce, and the appropriate level of respect for the manufacturing industry is crucial to protecting U.S. jobs and the long-term health of the economy.

Below is a summary of our recommendations. For more information, you can read the Council's full recommendations at: http://trade.gov/manufacturingcouncil/.

Recommendations for Manufacturing Innovation, Research and Development:

Designate federal manufacturing innovation programs as an Interagency Science and Technology Initiative.

Evolve the role of the national labs and strengthen the National Network for Manufacturing Innovation program to improve research and development that enables manufacturing processes and technologies to be expanded and optimized.

The Administration strengthens the National Network for Manufacturing Innovation and the role of the national labs.

Recommendations to Improve Workforce Development and the Public Perception of Manufacturing:

Develop a national manufacturing perceptions campaign to reset America's manufacturing mindset.

Realign Workforce development programs for Advanced Production Technologies.

Recommendation for Manufacturing Energy Policy:

Lead a study evaluating the implications of natural gas exports on jobs and economic growth.

# MANUFACTURING 2NC – SOLVENCY

**The first plank cuts costs and increases coordination**

**Laszkiewicz et, al., 6/9/14** – the Chair of the Manufacturing Council. He is the Vice President and General Manager of Rockwell Automation. (Michael, US Department of Commerce, http://www.trade.gov/manufacturingcouncil/documents/LR_IRD_04292014.pdf)//IS

The initiative, chaired by a senior appointee and with discrete budget fully funded to support U.S. global leadership in manufacturing capabilities and output, would align efforts across the multiple departments and agency units (e.g., Department of Defense, Department of Energy, Department of Commerce, National Science Foundation) to accelerate discovery, development and deployment of manufacturing technologies to serve the national interest. The initiative would also create visibility into all programs that support manufacturing innovation and provide a foundation to collect and analyze program data, identify gaps, improve coordination and collaboration, and eliminate costs of duplication. It would enable the navigation and interaction between manufacturing companies, federal, state and local governments, and academic institutions, and facilitate public outreach. This would require a high level policy making body with operational responsibilities in an appropriate agency. A precedent for such centralized program management exists for the National Nanotechnology Initiative, the Networking and Information Technology R&D program, and the U.S. Global Change Research Program within the National Science and Technology Council (NSTC). NSTC coordinates science and technology policy for the President across the federal government. For manufacturing R&D, the National Institute of Standards and Technology, within the Department of Commerce, should function as the NSTC program office and primary point of contact for the Manufacturing Innovation Initiative under the Inter-Agency Science and Technology Initiative.

**Second and third plank solve R&D and reduce capital costs**

**Laszkiewicz et, al., 6/9/14** – the Chair of the Manufacturing Council. He is the Vice President and General Manager of Rockwell Automation. (Michael, US Department of Commerce, http://www.trade.gov/manufacturingcouncil/documents/LR_IRD_04292014.pdf)//IS

Historically, the United States has emphasized fundamental discovery research. In manufacturing, however, government R&D programs should focus not only on fundamental research for new materials and products, but also on fundamental R&D for manufacturing itself, and, importantly, support links to business. Today, the most competitive nations in manufacturing invest in extensive technology transfer infrastructure, advanced manufacturing strategies, and collaboration models. They also maintain funding profiles that extend beyond product and material innovation. The United States already has an extensive portfolio of fundamental research programs in materials, particularly at the Department of Energy (DOE) and the National Science Foundation. To exploit this and other research, and to commercialize it into new products, the United States needs an equal level of innovation focused on fundamental R&D to create enabling manufacturing processes and technologies.

Strengthen the NNMI program. We support the mission of the NNMI program. Creating disruptive technologies to drive growth is the fundamental goal of the manufacturing institutes. In developing these technologies, U.S. manufacturers face significant challenges in both commercialization and collaboration. New products often require totally new manufacturing processes which can be complex, capital intensive and require collaboration. NNMI has the opportunity to provide cost-shared funding for technology development and commercialization, and build "teams" to facilitate collaboration between OEMs, SMEs and suppliers for new

manufacturing technologies.
The Council believes the NNMI program can be strengthened in several ways. In selecting new institutes, NNMI should establish priority investments in areas with the greatest potential economic impact and industry demand, fund these areas at a critical mass level, and include concise commercialization criteria that articulate the path to a saleable end product. The engagement of suppliers in the R&D phase is often a critical link missing between research and commercialization. Commercialization either cannot occur or will slow significantly while a supply chain for the new innovation is developed. NNMI should focus on the development of these suppliers for the ultimate technology commercialization. NNMI should also provide more technical and business support, such as IP negotiations, to facilitate participant engagement. Evolve the role of the national labs. The role of the DOE national labs should evolve so that it enables manufacturing process and technology research. The new mission would support industry commercialization of technologies associated with manufacturing institutes. The labs could then enhance the NNMI program by providing more effective engagement with industry and the NIST manufacturing programs. The labs are well funded and well-equipped, with highly trained staffs that could assist NNMI participants with complex systems-level issues, encourage technical transfer, and provide customized and flexible field services. Research personnel exchange programs between industry and national labs should be initiated to support increased tech transfer, improve technical networks and increase understanding between the different sectors of industry, government and academia. These activities would be particularly useful for SMEs.

**Fifth plank**

**Laszkiewicz et, al., 6/9/14** – the Chair of the Manufacturing Council. He is the Vice President and General Manager of Rockwell Automation. (Michael, US Department of Commerce,
http://www.trade.gov/manufacturingcouncil/documents/LR_IRD_04292014.pdf)//IS
Facilitate early supply chain creation for new innovation. The Department of Commerce should increase its focus on building "teams" that facilitate early engagement of suppliers for eventual manufacturing of the new product innovations. Again, the value of the manufacturing institutes is apparent, as institute consortia enable connections between organizations and improve the linkage between innovation and production. Each institute needs a clearly articulated definition of the technology game changers to attract the participation of suppliers capable of manufacturing the end product. Without this, any manufacturing institute will run the risk of developing new materials and products which have no path to commercialization within the institute participants. There is precedent for claiming this as a best practice, as some industry geographic clusters convene multiple players, coordinate research, development, design, engineering and manufacturing, and become critical to successful commercialization. SEMATECH in the semiconductor industry is a leading example. Regional cluster programs should be included in the Manufacturing Innovation Initiative budget matrix to provide improved visibility of these cluster programs within communities. The Department of Commerce should expand its program of national workshops to identify industry commercialization path priorities and requirements, as well as increase the advertising and promotion of existing state and federal programs. It should require state Manufacturing Extension Partnerships (MEP) to include a reference to MEP directly in their name. This will highlight federal involvement and improve recognition of federal investment and support within manufacturing communities.

# TAR SANDS CP

# 1NC TAR SANDS

Text: The United States Federal Government should subsidize the Northern Gateway pipeline to ensure affordable contracts.

**Counterplan incentivizes oil and natural gas production – solves energy demand**
Lewis '14- energy reporter, covering oil, natural gas and markets (Jeff, 6-17, "Northern Gateway pipeline approved, now Enbridge Inc's real work begins," Financial Post, http://business.financialpost.com/2014/06/17/northern-gateway-oil-pipeline-approved-now-enbridges-work-begins/?__lsa=8d4d-1a78)LC
Oil companies have also committed to ship about 708,000 barrels per day under firm contracts on Kinder Morgan Canada Inc.'s Pacific-bound Trans Mountain expansion to the West Coast. Enbridge itself is overhauling its massive mainline system to carry more crude to the U.S. Midwest. Calgary-based Enbridge has long touted so-called precedent agreements and funding from a clutch of oil producers and Asian partners as evidence of strong commercial backing for Gateway, which includes a twinned line to import oil-thinning condensate. The project has so far cost Enbridge and its supporters $400-million. The pipelines "have been fully subscribed under the precedent agreements," spokesman Ivan Giesbrecht said in an emailed statement.
However, those agreements aren't binding, legal experts familiar with such arrangements say, giving producers wiggle room to choose alternatives. A key question will be how much Gateway costs. Enbridge has warned of a "significant" increase once it completes a more detailed engineering assessment, and Mr. Giesbrecht said executing firm contracts with shippers would depend, in part, on the "commercial acceptability" of Gateway's approval conditions.
Those conditions compel Enbridge to use extra-thick steel on the pipeline, specialized tugboats to escort tankers through narrow coastal channels, and deploy leak-detection systems across long distances. The measures threaten to drive up construction costs for pipeline builders already grappling with a tight market for labour and materials, lawyers for Kinder Morgan's competing Trans Mountain project have said. "If broadly applied to industry, such conditions may limit the ability of pipeline companies to obtain competitive quotes because there are few sources of the required materials or services," lawyers at Osler Hoskin & Harcourt LLP told regulators assessing Gateway last year.

# OIL SANDS = NO SPILL

Oil sands avoid risk of offshore oil spill
Graveland '10- National correspondent for the Canadian press (Bill, 5-7-10, "Oil sands less risky than offshore drilling, Prentice says," The Globe and Mail, http://www.theglobeandmail.com/news/national/oil-sands-less-risky-than-offshore-drilling-prentice-says/article1211059/)LC
Environment Minister Jim Prentice says the ecological disaster in the Gulf of Mexico shows that Canada's oil sands are less risky than offshore drilling. He said he is "appalled and horrified" that a damaged well spewing an estimated 750,000 litres of oil a day has created a slick that stretches for kilometres off the Louisiana coast. Mr. Prentice just returned from climate-change negotiations with other environment ministers in Germany. He said the well was discussed briefly and concerns expressed about how to prevent similar occurences. Canada's oil sands have been targeted internationally by critics who say producing their "dirty oil" releases more carbon dioxide into the air than conventional crude oil. But the events in the gulf put the oil sands in perspective, Mr. Prentice suggested Friday. "I think it's always been clear that the oil sands provide a safe, stable, secure supply of energy and they need to be developed in an environmentally responsible way. The risks associated with the oil sands, the environmental risks, are significantly different than, and probably less than the kind of risks associated with offshore drilling," he said.

Oil sands seen as clean alternative to offshore drilling
Sankey '10- Calagry Herald (Derek, July, "Oilsands versus offshore," University of Calagry, http://www.ucalgary.ca/ENCH/AER/news/Oilsands%20Versus%20Offshore_Bus%20in%20Cgy_July2010.pdf)LC
As thousands of barrels of oil gush into the Gulf of Mexico following the April 20 explosion of the Transocean Ltd. deep-water offshore oil rig operated by BP Plc, energy leaders in Alberta have been abuzz about what the massive disaster could mean closer to home. Major oil companies such as Imperial Oil and ExxonMobil Corp., Chevron Corp., Husky Energy, BP Canada Inc., ConocoPhillips Canada and others – all have a lot at stake. Many are invested in both Alberta's oilsands as well as the three offshore oil rigs currently producing off the east coast of Newfoundland: Hibernia, Terra Nova and White Rose. There is also the Sable Island natural gas project off the shores of Nova Scotia. Some industry and political leaders have mused that in light of the Gulf disaster – and an ongoing closer examination of the real risks involved with offshore production – Alberta's oilsands could be a relatively clean alternative. Federal Environment Minister Jim Prentice publicly stated the oilsands likely have lower environmental risks compared to offshore drilling, while Premier Ed Stelmach declared an oilsands spill would be easier to contain.

# OIL SANDS GOOD

Oil sands popular amongst investors
Vanderklippe ’10- Reporter at The Globe and Mail (Nathan, 12-18-10, “Energy giants team up on blockbuster deal,” The Globe and Mail, http://search.proquest.com.proxy.lib.umich.edu/docview/1444843822?pq-origsite=summon)LC

**Combined with what it has already spent to acquire an oil sands stake, that means Total alone will spend $20-billionon Canadian projects by 2020. The French oil giant will spend the next few years boosting its Alberta work force from its current 250 to 1,400. “This is a major investment position in the province,” said Jean-Michel Gires, the president of Total E&P Canada Ltd., who expects the company will produce 200,000 barrels per day in Canada by the end of 2020. “I think it’s all good news for the province about its capacity to promote the development of its resource,” he said. At the same time, Suncor expects strong oil sands growth to propel an 8-per-cent annual increase in oil output for the next decade, bringing it to a million barrels per day by 2020. It plans to spend between $8-billion and $9.5-billion between 2012 and 2014 as it builds new projects.**

Canadian oil sands economically and environmentally sounds
Stringham ’12- Canadian Association of Petroleum Producers (G, Chapter 2 – “Energy Developments in Canada's Oil Sands,” Developments in Environmental Science, Volume 11, pages 19- 34, Science Direct)LC
The Alberta government created the first oil sands policy in 1962. The next year, the Great Canadian Oil Sands (GCOS) venture was formed. It was followed in 1964 by Syncrude, which was then a research consortium. The first commercial oil sands developments followed with GCOS in 1967 and Syncrude in 1978. But in the 1980s, volatile commodity prices and the federal government's National Energy Program changed the game—a few years of economic recession and bad policy moved 50 years of proved technology and expertise to the back burner. And by the early 1990s, the oil sands outlook was becoming increasingly negative. The recession and the oil price slump were unrelenting. Alberta leaders knew something had to be done to support the economy and ensure oil sands development had a future. The National Oil Sands Task Force was formed in 1995 to examine the options, and in 1996, it produced “A Declaration of Opportunity,” signed by all parties including then Prime Minister Jean Chretien. That declaration established a goal of 1.2 million bbl/day of oil sands production by 2020—at the time, an ambitious target. The declaration paved the way for the necessary fiscal terms required for industry to manage the risks associated with large, long-term capital investments. Most importantly, the declaration ushered in a new era of cooperation among the federal government, the provincial government and industry aimed at advancing the oil sands industry for the benefit of all Canadians. By 2004, economic conditions were much improved. Oil prices were up—first to $50, then $100 in January 2008, and finally, $147 per barrel in July 2008. Thanks to the sudden economic uplift, the declaration's ambitious goal of production for 2020 was exceeded in 2007. But Alberta's attractive fiscal policy, record-high oil prices and low interest rates created an unintentional perfect economic storm, the eye of which was the small community of Fort McMurray. Costs, both local and global, increased quickly. Booms create short-term imbalance, economically as well as socially. And infrastructure, housing, services, and other pressures became acute in Fort McMurray. In contrast to the 1990s, the pendulum now had swung the other way, with

environmental and social issues taking on increasing prominence, in part due to local and regional issues in the Wood Buffalo region and in part due to changes in broader societal expectations. Questions emerged about whether Alberta's and Canada's environmental policies were prepared for this pace and level of resource development, especially in light of increasing global focus on climate change. Then, as it started to grow, the oil sands industry took a downward turn, a victim of local pressures and a global economic recession. Although given the multiyear timescale for regulatory approvals and construction, some projects under construction continued and a major project began its construction phase. Today, 3 years after the most recent downturn began, economic stability is returning and the oil sands industry is on the upswing. A number of projects are back on the books, and some new projects have been announced, even though we continue to be in an uncertain period in terms of policy and the economy; economic returns from oil sands projects remain challenging. At the same time, the industry continues to implement new technologies with lower environmental impacts. However, some environmentalists are advancing an aggressive anti-oil sands campaign. They often focus on environmental performance, ignoring the economic, and energy security aspects of this resource—all three are fundamental. They claim the energy industry can be made“greener”in very short periods of time through a global transformation to renewable forms of energy—a laudable goal over the longer term but unrealistic for the near to medium term. In many respects, the issue is not oil sands. Rather, it's broader climate policy and the off-hydrocarbons agenda that underlies these campaigns, and the objective is to accelerate the energy transformation process.

# SPILLS DECREASE BIODIVERSITY

Oil spills devastate biodiversity- impact lasts decades
Center for Biological Diversity '11 (April '10, http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/oil_and_gas/gulf_oil_spill/a_deadly_toll.html)LC

Last year's BP Deepwater Horizon catastrophe spilled 205.8 million gallons of oil and 225,000 tons of methane into the Gulf of Mexico. Approximately 25 percent of the oil was recovered, leaving more than 154 million gallons of oil at sea. In addition to the oil, nearly 2 million gallons of toxic dispersants were sprayed into the Gulf's waters. This did not actually reduce the amount of oil left in the ocean, but merely broke it into smaller particles, which may actually make the oil more toxic for some ocean life and ease its entry into the food chain. A year after the April 20, 2010, explosion that caused the well to leak oil for months, the ultimate toll on people and wildlife is still not fully understood. But one thing is clear: The number of birds, sea turtles, dolphins and other animals sickened or killed and tallied as part of the government's official count represents a small fraction of the total animals harmed by this disastrous spill. The toll on wildlife continues to mount. Dead turtles, marine mammals, birds and fish are still washing up on beaches. Dolphins are miscarrying, and pelicans are attempting to nest on beaches polluted with tar balls and subsurface oil. The impacts of previous oil disasters show that wildlife in the Gulf will continue to be affected by this spill for decades. Lingering pollution from a 1969 spill in Massachusetts, for example, is still affecting fiddler crabs. Likewise, oysters and mangroves in Mexico are still affected by pollution from the 1979 Ixtoc spill in the Gulf, and oil remains on Alaskan beaches from the 1989 Exxon Valdez spill with continuing impacts on birds and fish.

In order to comprehensively assess the likely impacts of the Gulf oil spill to date, the Center for Biological Diversity has combed government figures, news reports and scientific articles. To provide a more accurate estimate of the death toll, we used multiplication factors identified by leading scientists that estimate how many more animals are killed than are actually observed or collected. In total, we found that the oil spill has likely harmed or killed approximately 82,000 birds of 102 species, approximately 6,165 sea turtles, and up to 25,900 marine mammals, including bottlenose dolphins, spinner dolphins, melon-headed whales and sperm whales. The spill also harmed an unknown number of fish — including bluefin tuna and substantial habitat for our nation's smallest seahorse — and an unknown but likely catastrophic number of crabs, oysters, corals and other sea life. The spill also oiled more than a thousand miles of shoreline, including beaches and marshes, which took a substantial toll on the animals and plants found at the shoreline, including seagrass, beach mice, shorebirds and others.

# OIL SANDS BAD- ENVIRONMENT

Oil sands are comparatively worse than other forms of energy
Schiffman '11- author of "Green Issues and Debates," (Howard S, "Oil Sands," http://knowledge.sagepub.com.proxy.lib.umich.edu/view/greenissuesdebates/n88.xml) LC
The United States imports more oil from Canada than from any other nation—more than 2 million barrels per day. Nearly all of this oil comes from Canada's oil sands, located in Alberta. Thus far, Venezuela has lacked the capital and technology to extract and refine its oil sands. Canada, however, is aggressively extracting and refining the Alberta oil sands, much to the dismay of those concerned with the environmental and human health impacts of extracting bitumen from the oil sands and then refining and burning it. Oil sands projects are the fastest-growing source of GHG pollution in Canada, and beyond the damage caused to the environment by GHGs, oil sands extraction not only uses copious amounts of water—between two and five barrels of water for every barrel of oil produced—but that water ends up in "tailings lagoons." It is estimated, based on the industry's own data, that these lagoons currently leak more than a billion gallons of contaminated water into the environment annually. Oil sand extraction and refining also requires massive amounts of energy—nearly a billion cubic feet of natural gas per day. In addition to the water and energy required to extract and refine oil sands, parts of Canada's Boreal Forest, the world's largest terrestrial carbon storehouse and site of the world's largest forest wetland ecosystem, have been slated for tar sands projects. Other, more general environmental concerns related to oil sands projects are related to the necessity of clearing trees and brush away as well as removing topsoil, sand, clay, and gravel in order to be able to mine the oil sands. Beyond these devastating environmental impacts, oil sands projects also have grave implications for human health, related to both the extraction process and the refining process. The contaminated water that seeps from the tailings lagoons is directly affecting communities downstream from Alberta's oil sands projects; citizens of those communities have alarmingly elevated cancer levels, and their subsistence economies are threatened because of polluted fisheries. Because tar sands oil is burdened with more pollutants than conventional oil, the refineries that process tar sands oil release carbon dioxide, heavy metals, and sulfurs, exposing communities near these refineries to dangerous levels of these toxins. Studies of communities downstream from the Alberta oil sands projects show high levels of carcinogens and toxic substances in fish, water, and sediment. While Alberta's own studies, conducted earlier than these more damning studies, dismissed such health concerns, residents and other concerned parties cite elevated cancer levels and have complained about the oily scum left behind in their glasses after consuming a glass of water. Researchers who have studied sediment near and around the oil sands projects have also discovered dramatic increases in the sediment of a certain type of hydrocarbon that is a natural carcinogen; in some cases, the levels of these carcinogens were as much as four times greater than the recommended limits in the United States; as of yet, Canada has no guidelines for this particular carcinogen. While the study concluded that treated drinking water in these communities is safe, high levels of mercury, arsenic, and the aforementioned hydrocarbon have been found in local fish. This is particularly upsetting for those residents who rely on fishing as part of their subsistence economy, especially members of Native communities, who depend on fish for a significant portion of their diets.

Environmental restrictions prevent will prevent successful oil sands development
McCarthy '7- Global energy reporter for the Globe and Mail (Shawn, 4-26-2007, "Oil sands hit by climate change politics: Industry fears impact of emission targets," The Globe and Mail, ProQuest Historical Newpapers)LC
Alberta's oil producers are finding themselves squarely in the cross-hairs of the government's new climate change regulations, which aim to reduce greenhouse gas

emissions by 20 per cent by 2020, even as industry plans to triple oil sands production. Environment Minister John Baird is due to release targets for large industrial emitters today in Toronto, and the Conservative government is clearly pursuing a tougher line than it announced last fall. The booming oil sands development represents the fastest growing source of greenhouse gas emissions, and industry analysts suggested the government will be hard-pressed to meet its targets without significant reductions in expected emissions there- either through a reduction in planned growth or through expensive technological solutions.

# SOLVENCY

Canada has sufficient oil to sustain US economic growth
Investor's Business Daily '9 (5-19, "Canada's Oil Bonanza," ProQuest, http://search.proquest.com.proxy.lib.umich.edu/docview/1034593897?pq-origsite=summon)LC
Energy Policy: Talk about alternative energy! Canada has the oil the American economy desperately needs -- and then some. So why do we treat this and other energy allies like pariahs? The next Saudi Arabia? Why, Canada. Don't believe it? A new study by the respected energy consultancy IHS-CERA (formerly Cambridge Energy Associates) says Canada's oil sands could provide the U.S. with billions of barrels of oil -- oil we must have or our economy will shudder to a halt. In 2000, Canada's sands produced just 600,000 barrels of oil a day; today, it produces 1.3 million. By 2030, it could be producing as much as 6 million. It's a good thing they're doing it, because we'll need it -- despite all the blather you hear about so-called alternative energy picking up the slack. It won't. It can't. Virtually no major reputable forecaster sees anything other than a very minor role for alternative energy over the next three decades. Like it or not, fossil fuels are the name of the game. Both the U.S. Energy Department and the American Petroleum Institute forecast that, barring some miracle breakthrough, at least until 2030 oil, coal and natural gas will be needed for at least 80% of our energy output -- even as our own oil production shrinks.

Canadian government prevents spills through precautionary measures
Stafford '14- editor of oilprice.com (James, 5-29, "Canadian Law Makes It Cheaper To Prevent Oil Sands Leaks Than Clean Them Up," Oilprice.com, http://oilprice.com/Energy/Energy-General/Canadian-Law-Makes-It-Cheaper-To-Prevent-Oil-Sands-Leaks-Than-Clean-Them-Up.html)LC
As the Canadian government pushes a new law rendering pipeline companies liable for all damages from leaks and spills, the only friend to both sides in this polarized world of dirty oil sands is leak prevention technology. On May 14, amid heightened opposition to two planned pipelines, Canada's Natural Resources Ministry unveiled a new law making pipeline operators liable for all the costs and damages related to oil spills, regardless of whether the operators were at fault or demonstrated negligence. Under the new law, pipeline operators will be required to set up advance clean-up funds for future spills, while the Canadian National Energy board will be given the authority to order operators to reimburse those affected by spills.

# AT: OIL SANDS BAD FOR ENVIRONMENT

COSIA spurring environmental collaboration and sustainability
Cattaneo ’13- Calagary bureau chief (Claudia, 4-5, In search of breakthroughs; Slow progress, but 180 projects moving forward under oil sands innovation alliance, The Vancouver Sun, http://search.proquest.com.proxy.lib.umich.edu/docview/1324304751?pq-origsite=summon)LC
It has been a year since the CEOs of 12 major oil sands companies pledged in Calgary to set aside historic rivalries and collaborate to accelerate the pace of environmental improvement through a new organization, Canada's Oil Sands Innovation Alliance (COSIA). During that period, the backlash against development of the Alberta-based resource has intensified, feeding off regulatory processes for new export pipelines such as Keystone XL and Northern Gateway, and incidents seen as contradicting the oil sands sector's promise of responsible development such as last week's pipeline spill in Arkansas. But Dan Wicklum, COSIA's chief executive officer, said the environmental wins are beginning and the structure is in place for major breakthroughs.
"I have a trite saying: as scientists and engineers, we have a difficult time scheduling our breakthroughs," Mr. Wicklum said in an interview. "But the ambition is high. When you look at the projects that we have in the pipeline, the potential is very real."

# TOPICALITY

# LEASING NOT T

**Granting of leases and permits isn't a "federal agency activity" – can't be development**

CFR 06 (Code of Federal Regulations, amended January 5, 2006, "15 CFR 930.31 - Federal agency activity," http://www.law.cornell.edu/cfr/text/15/930.31, alp)

(a) The term "Federal agency activity" means any functions performed by or on behalf of a Federal agency in the exercise of its statutory responsibilities. The term "Federal agency activity" includes a range of activities where a Federal agency makes a proposal for action initiating an activity or series of activities when coastal effects are reasonably foreseeable, e.g., a Federal agency's proposal to physically alter coastal resources, a plan that is used to direct future agency actions, a proposed rulemaking that alters uses of the coastal zone. "Federal agency activity" does not include the issuance of a federal license or permit to an applicant or person (see subparts D and E of this part) or the granting of federal assistance to an applicant agency (see subpart F of this part). (b) The term federal "development project" means a Federal agency activity involving the planning, construction, modification, or removal of public works, facilities, or other structures, and includes the acquisition, use, or disposal of any coastal use or resource.

# REFORMING LEASING = EXTRA-T

**Aff is extra-T – Increases Onshore Production as well**

Smith 6-27 – Congressman for the 8th district of Missouri, serves on the House Judiciary Comitte and House Natural Resources Committee (Jason, "Congresssman Jason Smith Capitol Report: Working to Lower Energy Costs", The Rolla Daily News, 6/27/14, http://www.therolladailynews.com/article/20140627/NEWS/140628972/10088/OPINION)// bd

The Lowering Gasoline Prices to Fuel an America that Works Act takes a three-pronged approach to lower fuel prices:

Increases Offshore Production: Since taking office, President Obama has restricted new offshore energy production, canceled lease sales, and locked-up over 85 percent of our offshore areas. In stark contrast to President Obama's no-new-drilling, no-new-jobs plan, the House plan proposes a drill-smart, job-creation plan that would require President Obama to move forward with new offshore energy production in areas containing the most oil and natural gas resources.

**Increases Onshore Production**: The legislation would streamline government roadblocks and bureaucratic red-tape that block and delay onshore American energy production. The bill would reform the leasing process for onshore oil and natural gas projects on federal lands to eliminate unnecessary delays and reform the process for energy permitting.

Increases Alaskan Production: The bill would ensure that oil and natural gas resources in the National Petroleum Reserve-Alaska are developed and transported in a timely, efficient manner. The NPR-A was specifically established as a petroleum reserve in 1923. According to conservative estimates by the U.S. Geological Survey, there are over 2.7 billion barrels of oil and 114.36 trillion cubic feet of natural gas in the National Petroleum Reserve-Alaska.

We are blessed to live in a land with abundant natural resources. We need a federal government that will get out of the way so that we can develop those resources. Not only will these projects help American families meet their energy needs, they will also create thousands of jobs in the process. America does not have to be at the mercy of foreign governments to meet our current and future energy needs. As gas prices creep higher each day we should become less dependent on Middle Eastern oil. I will continue working to develop the energy resources we have right here in North America to secure our economic future and to put more Americans to work.